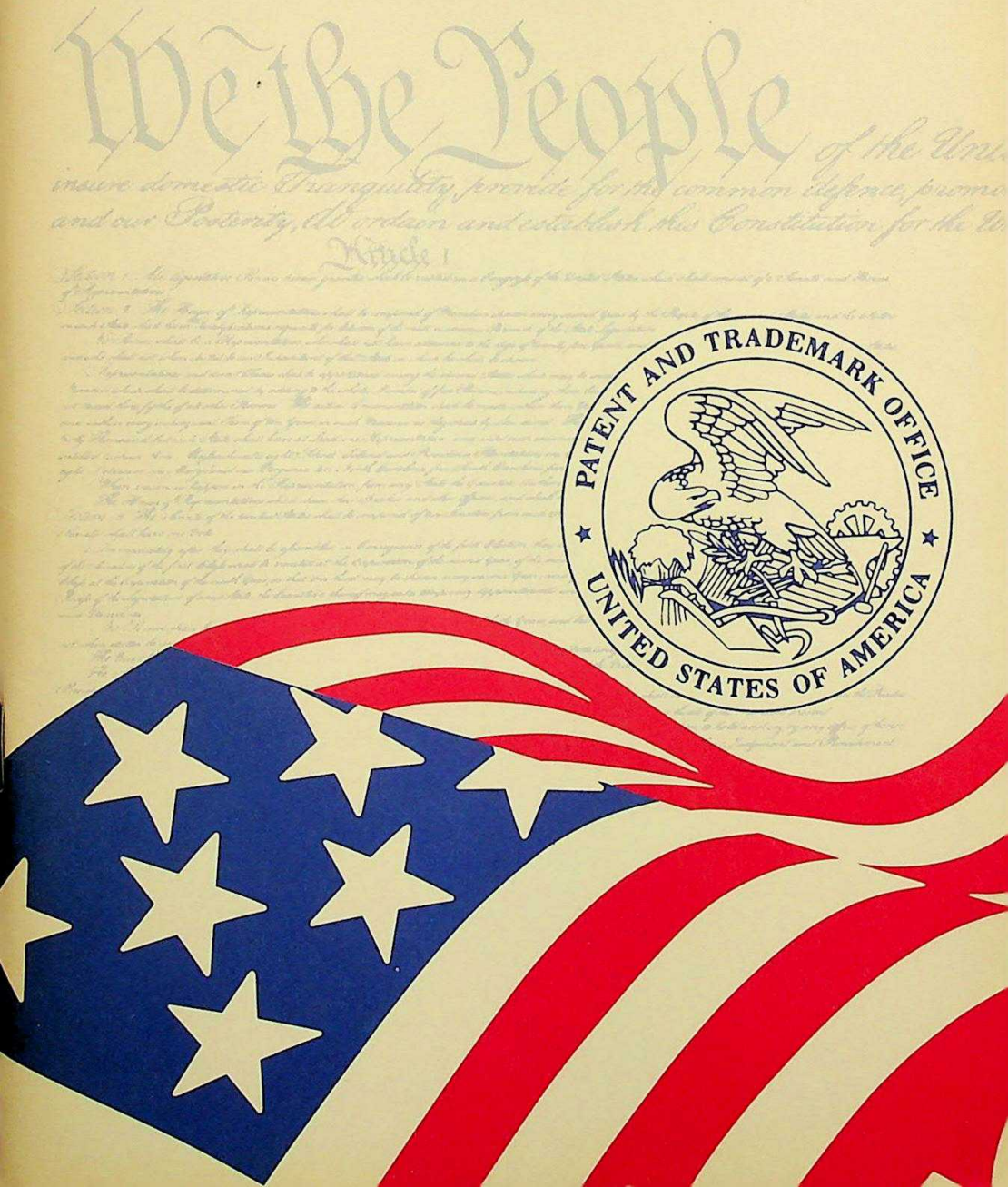
ODT

The Story of the U.S. Patent and Trademark Office

U.S. DEPARTMENT OF COMMERCE/Patent and Trademark Office



PROJECT XL

A Quest For EXCELLENCE

GOVERNMENT

PROFESSIONAL SOCIETIES

BUSINESS

PARENTS

STUDENTS

EDUCATORS

U.S. DEPARTMENT OF COMMERCE · PATENT & TRADEMARK OFFICE

The Story of the U.S. Patent and Trademark Office

U.S. DEPARTMENT OF COMMERCE

C. William Verity, Secretary

Patent and Trademark Office

Donald J. Quigg, Assistant Secretary of Commerce
and Commissioner of Patents and Trademarks

August 1988

The issue of patents for new discoveries has given a spring to invention beyond my conception.

THOMAS JEFFERSON

The Patent System added the fuel of interest to the fire of genius.

ABRAHAM LINCOLN

Foreword

On April 10, 1790, President George Washington signed the bill which laid the foundations of the modern American patent system. Three years earlier, at Philadelphia, the Constitutional Convention had given Congress the power "to promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

For 198 years the patent system has encouraged the genius of hundreds of thousands of inventors.

It has protected the inventor by giving him an opportunity to profit from his labors, and it has benefited society by systematically recording new inventions and releasing them to the public after the inventors' limited rights have expired.

The Patent and Trademark Office has recorded and protected the telegraph of Morse, the reaper of McCormick, the telephone of Bell, and the incandescent lamp of Edison.

It has fostered the genius of Goodyear and Westinghouse, of Whitney and the Wright Brothers, of Mergenthaler and Ives, of Baekeland and Hall.

Under the patent system, American industry has flourished. New products have been invented, new uses for old ones discovered, and employment given to millions.

Under the patent system a small, struggling nation has grown into the greatest industrial power on earth.

The patent system is one of the strongest bulwarks of democratic government today. It offers the same protection, the same opportunity, the same hope of reward to every individual. For 198 years it has recognized, as it will continue to recognize, the inherent right of an inventor to his government's protection. The American patent system plays no favorites. It is as democratic as the Constitution which begot it.

The fundamentals of the modern American patent system are both simple and brief. In general, any person who has invented any new and useful process, machine, manufacture or composition of matter, or any improvement thereof, may obtain a patent. An application must be filed with the Commissioner of Patents and Trademarks accompanied by the necessary papers describing the invention, and the prescribed fee. The Patent and Trademark Office then searches prior patents and publications to determine whether the application presents something patentable. It must be new, useful, and involve invention.

The patent gives the inventor the right to exclude all others from making, using, or selling his invention for 17 years.

The Patent and Trademark Office is one of the most unusual branches of the U.S. Government. Its examining staff of over 1,400 is trained in all branches of science and exam-

ines thoroughly every application to determine whether a patent may be granted—a task, in these days, involving the most exhaustive research. Not only must the examiners search United States and foreign patents to learn if a similar patent has been issued, but they must study scientific books and publications to discover whether the idea has ever been described. Previous publication, invention or use prevents a patent being issued.

To facilitate this enormous amount of research the examining staff is divided into Patent Examining Groups, each group handling one or more branches of industrial activity. In addition to issuing patents (including, since 1842, design patents; and since 1930, plant patents), the Patent and Trademark Office has since 1870 been in charge of registering trademarks, of which more than 1,400,000 have been registered to date. The importance of trademarks in building up industrial recognition and goodwill cannot be overestimated.

In its earlier days the Patent and Trademark Office had on various occasions the responsibility for administering copyright matters, collecting and publishing agricultural information, and even collecting meteorological data, and for some years it was the custodian not only of the famous old Patent Office models—the delight of every visitor to Washington for many years—but of the Declaration of Independence, and other historical documents and relics. By publishing and distributing copies of every United States patent the Patent Office has made available to the public the world's greatest scientific and mechanical library.

The patent system is the best, most workable method yet devised for protecting inventions, fostering industrial and technical progress, and ultimately giving to the world the benefits of the individual inventor's genius. The American patent system was the first to recognize by law the inherent right of an inventor to limited protection and to provide for the systematic examination of applications in the Patent and Trademark Office, and it has become the model for the patent systems of numerous foreign countries. Truly, as Lincoln said, the patent system has added the fuel of interest to the fire of genius.

Patents in the United States before 1790

Before the Constitution of the United States was adopted many of the American Colonies and States granted patents. The first patent on this continent was granted by the Massachusetts General Court to Samuel Winslow in 1641 for a novel method of making salt. The first patent on machinery was granted by the same Court to Joseph Jenkes in 1646 for a mill for manufacturing Scythes.

The Colonial and State patents, unlike modern patents, were issued only by special acts of legislature. There were no general laws providing for the granting of patents, and in every instance it was necessary for an inventor to make a special appeal to the governing body of his Colony or State.

When the delegates from various States met in Philadelphia in 1787 to frame the Constitution, one of the problems before them was to give protection to inventors and authors. Although there was a widespread fear of "monopolies" of the kind granted by European monarchs, no objection was raised to the principle of granting limited monopolies in the form of patents on inventions. A patent, in the larger sense, is of greater benefit to society than to the individual inventor. By giving the inventor a limited amount of protection it assures society of the benefits of his genius. The delegates in Philadelphia fully appreciated this, and from their deliberations came the provision in the Constitution which enabled Congress to enact the first patent law from which the modern patent system has gradually evolved.

The Constitutional Provision

On May 14, 1787, delegates from the various States met in Philadelphia to frame the Constitution of the United States. On August 18 both James Madison of Virginia and Charles Pinckney of South Carolina submitted proposals regarding the protection of inventors by means of patents, and on September 5 the clause concerning patents and copyrights was adopted by the Convention. On September 11 the Constitution was signed by the delegates. Included in article 1, section 8, was the following provision:

> Congress shall have power * * * to promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.

On March 4, 1789, government under the new Constitution began operations, and on January 8, 1790, President Washington addressed the second session of the First Congress, meeting in New York City, urging the Representatives to give "effectual encouragement * * * to the exertion of skill and genius at home." A week later a committee consisting of Edanus Burke of South Carolina, Benjamin Huntington of Connecticut and Lambert Cadwalader of New Jersey was instructed to bring in separate bills on patents and copyrights. On February 16 this committee presented the patent bill, and after debate in the House and in the Senate it was passed.

THE STORY OF THE PATENT AND TRADEMARK OFFICE

1790 ACT OF APRIL 10

George Washington Signs the First Patent Bill

FOR THE FIRST TIME in history the intrinsic right of an inventor to profit from his invention is recognized by law.

Previously, privileges granted to an inventor were dependent upon the prerogative of a monarch or upon a special act of a legislature. Now, if an inventor produces a patentable invention, his *right* to certain privileges is established.

Among the Provisions of the Act:

The subject matter of a United States patent is defined as "any useful art, manufacture, engine, machine, or device, or any improvement thereon not before known or used." To apply for a patent a specification and drawing, and—if possible—a model, must be presented.

The responsibility for granting patents is placed upon a Board consisting of the Secretary of State, the Secretary of War, and the Attorney General.

The Board members have the power to issue a patent, "if they shall deem the invention or discovery sufficiently useful and important," for a period not to exceed 14 years. The Board fixes the duration of each patent.

The Board's authority to grant patents is absolute, and there is no appeal from its decisions.

The responsibility for administering the patent laws is given to the Department of State.

Fees for a patent amount to between $4 and $5.

The Board in charge of granting patents styled itself the "Patent Board," the "Patent Commission," or the "Commissioners for the Promotion of Useful Arts." Its first members were Thomas Jefferson, Secretary of State; Henry Knox, Secretary of War; and Edmund Randolph, Attorney General.

As Secretary of State, Thomas Jefferson was in effect the first Administrator of the American patent system—his Department having been assigned the task of administering the patent laws. Jefferson, noted for his opposition to monopolies, none the less became a firm believer in the value of limited monopolies for authors and inventors.

"Certainly," he wrote, "an inventor ought to be allowed a right to the benefit of his invention for some certain time. Nobody wishes more than I do that ingenuity should receive liberal encouragement," He was likewise of the opinion that "in the arts, and especially in the mechanical arts, many ingenious improvements are made in consequence of the patent right giving exclusive use of them for 14 years." Jefferson, besides being the first supervisor of the Patent Office, was in effect the first patent

"examiner." As Secretary of the Department of State he became the moving spirit of the Board which decided whether patents were to be granted. According to available records it appears that he made a personal examination of all the applications that came before the board.

Jefferson's interest in patents and inventions was that of a well educated, brilliant man. A mathematician, astronomer, architect, and student of languages, Jefferson was undoubtedly the most accomplished and versatile man in the public life of his time. Not only did he appreciate the value of patents from an intellectual viewpoint, but as an inventor himself he had first-hand knowledge of the problems of creative workers. Although he never took out a patent Jefferson made a number of inventions, one of which—an improvement in the mold board of the plough—had a significant effect on the agricultural development of this country and earned him a decoration from the French Institute. He also invented a revolving chair which his enemies accused him of designing "so as to look all ways at once," a folding chair or stool which could be used as a walking stick, a machine for treating hemp, and a pedometer.

Jefferson's appreciation of invention was one of his outstanding characteristics. As Minister to France he continually sent back news of the latest scientific developments in Europe, and he was the first to notify this country of James Watt's great contribution to civilization—the steam engine. Jefferson was ever zealous in encouraging the introduction of new things: no one could have been more ably fitted to administer the first American patent laws.

May 31.—Congress enacts the first Federal copyright law.

July 31.—Samuel Hopkins, of Pittsford, Vt., but at this time of Philadelphia, Pa., receives the first United States patent, for an improvement in "the making of Pot ash and Pearl ash by a new Apparatus and Process." The grant is signed by George Washington, President of the United States, and also carries the signatures of Edmund Randolph, Attorney General, and Thomas Jefferson, Secretary of State. The original document is still in existence in the collections of the Chicago Historical Society. (The Vermont Historic Sites Commission erected a marker at the former residence of Samuel Hopkins, in the summer of 1956.)

1790-93.—During these years one difficulty the Board has to face is that the members have sufficient time to spare from their regular duties to devote to patent matters. A total of 55 patents has been granted under the Act of April 10, 1790.

1793 ACT OF FEBRUARY 21

The Patent Laws Are Substantially Changed

The Act of 1793, by omitting the requirement that an invention be "sufficiently useful and important," and making other changes, alters the whole tenor of the patent laws.

The "registration" system is substituted for the "examination" system. An application is no longer examined for novelty and usefulness, but a patent is granted to anyone who applies, submits the proper drawings and pays the necessary fee. The issuing of patents becomes little more than a clerical function.

This system remains in effect for 43 years.

Some Provisions of the Act

The Patent Board is abolished and the duty of granting patents is placed upon the Secretary of State.

Aliens are unable to obtain patents (in some countries citizens were forbidden to obtain patents outside their own country.) The term of a patent remains 14 years.

The application fee is changed to $30.

In the case of interferences (two or more persons applying for the same patent at the same time) the Secretary of State appoints a board, consisting of one man chosen by himself and one chosen by each applicant, to determine the issue. The board's decision is final.

1794 *March 14.*—Eli Whitney, 2 years out of Yale, receives a patent for his cotton gin.

The cotton gin, by replacing the slow cleaning of seeds by hand labor, made possible the great textile industry of later years. Whitney's patent was one of the earliest issued by the Patent Office to have a vital bearing on American civilization.

1800 The Government moves from Philadelphia to Washington, and the State Department, including the Patent Office, is assigned temporary quarters in the Treasury Office.

April 17.—Aliens are given the right to obtain patents provided they have resided in this country for 2 years and have declared their intention of becoming citizens.

1802 The Patent Office Becomes a Separate Unit

Secretary of State James Madison gives the Patent Office the status of a distinct unit or division within the Department of State by appointing Dr. William Thornton, at a salary of $1,400 a year, "to have charge of the issuing of patents." This salary is later increased to $1,500.

Dr. William Thornton, first "chief" and later "Superintendent" of the Patent Office, October 1802 to March 28, 1828.

Dr. Thornton was a man of marked individuality, culture, and intelligence. Born in the British West Indies and receiving his medical degree at Edinburgh, Scotland, he came to the United States in 1786 and two years later became a citizen. He first achieved prominence in this country by designing the original plans for the Capitol in Washington, for which he was given $500 and a plot of land. He was a close personal friend of James Madison, and was intimately acquainted with the prominent men of his time. As head of the Patent Office, he devoted himself wholeheartedly to the task of promoting the benefits of the patent system. He even took out a number of patents himself (a practice later forbidden, for all Patent Office employees) and was associated with John Fitch in the development of the steamboat.

May 5.—Mary Kies, of Killingly, Windham County, Conn., is the first woman to obtain a United States patent. Her invention relates to "weaving straw with silk or thread."

1810 The Patent Office is assigned four rooms in the west wing of Blodgett's Hotel, on E Street between Seventh and Eighth Streets NW. The building, purchased and repaired by the Government in 1810, was never used as a hotel, but housed the first theater in Washington.

Congress refers to the "keeper" of patents. No official designation has as yet been given to the head of the Patent Office, but soon afterwards Dr. Thornton adopts the title of "Superintendent." In 1830 this title is officially recognized.

1814 *August 25.*—The British burn Washington. Dr. William Thornton, Superintendent of Patents, saves the Patent Office from destruction by pleading with the British Commander not to "burn what would be useful to all mankind." During the following year Congress meets in the Patent Office building (Blodgett's Hotel), while the Capitol is being restored.

1816 *April 11.*—President Madison, in a special message to Congress, urges that the Patent Office be given the status of a separate bureau.

1824 Daniel Webster, in a speech in Congress, declares that invention is the fruit of a man's brain, that industries grow in proportion to invention, and that therefore the government must aid progress by fostering the inventive genius of its citizens. He thus expresses the same views of the patent system voiced by his predecessors, Washington, Jefferson, Hamilton, Madison, and Franklin.

1828 Dr. William Thornton dies on March 28.

Dr. Thomas P. Jones, Superintendent of Patents, April 12, 1828 to June 10, 1829.

Dr. John D. Craig, Superintendent of Patents, June 11, 1829 to January 31, 1835.

1829 Dr. John D. Craig, third Superintendent of Patents, points out to Congress that "at present the Patent Office is a source of revenue, which, it is presumed, the framers of its laws never intended; and the compensation received by those connected with it is far less, in proportion to their labor and responsibility, than in any other office of the Government within the District." This complaint was to be made frequently in the years to come.

An addition to Blodgett's Hotel, home of the Patent Office and the city post office, is built. The Patent Office is housed in the new structure.

1834 *June 21.*—Cyrus H. McCormick of Virginia receives a United States patent for his reaper. McCormick's invention, one of America's greatest contributions to agricultural advance, makes the vast grain fields of the West available for full production and assures a sufficient supply of cereals for the world's needs.

1835 *October 14.*—Henry Blair, of Glen Ross, Maryland, receives a patent for an improved corn planter. He may have been the first black inventor to receive a patent. Two years later, Blair received a patent for a cotton planter.

J. C. Pickett, Superintendent of Patents, February 1, 1835 to April 30, 1835.

Henry L. Ellsworth, Superintendent of Patents, July 1, 1835 to July 11, 1836; first Commissioner of Patents, July 11, 1836 to May 6, 1845.

Ellsworth was born in Windsor, Conn., in 1791, the son of Oliver Ellsworth, one-time Chief Justice of the Supreme Court. Before being named Superintendent and subsequently Commissioner of Patents, he had been president of the Aetna Insurance Co., Chief Commissioner of Indian Tribes, and mayor of Hartford, Conn. His interest in agriculture led him to obtain the first govermental appropriation in this field. As Commissioner of Patents he was the first Federal official to collect agricultural information for the benefit of the farmers, and he later became known as the "Father of the Department of Agriculture." His interest in Samuel Morse's telegraph led him to help obtain a $30,000 grant from Congress for testing the possibilities of that invention.

December 31.—John Ruggles, newly appointed Senator from Maine, moves that the Senate appoint a committee to study the Patent Office with a view to making changes in the existing laws. The Senate concurs, and appoints Ruggles Chairman.

1836

February 25.—Samuel Colt, of Hartford, Conn. receives a patent on a "Revolving Gun." This is the first of the famous "Six-Shooters," which are to play such an important role in the winning of the West.

March.—Texas dissolves its ties with Mexico and becomes an independent republic. Article 2, section 3 of its constitution gives its Congress the power "to grant * * * patents and copyrights and to secure to the authors and inventors the exclusive use thereof for a limited time."

April 28.—John Ruggles, Senator from Maine, completes his report on the patent laws, declaring that:

"For more than 40 years the Department of State has issued patents on every application, *without any examination into the merits or novelty of the invention.*

"Many patents granted are worthless and void and conflict upon one another, and a great many law suits arise from this condition.

"Frauds develop. People copying existing patents, make slight changes, and are granted patents.

"Patents have become of little value, and the object of the patent laws is in great measure defeated."

John Ruggles, through whose efforts the patent laws were to be so successfully revised, was born in Westboro, Mass., in 1789. After graduating from Brown University in 1813 he moved to Thomaston, Maine, where he practiced law until elected a member of the State legislature. He was later appointed to the State supreme court, and in 1835 was elected for one term as U.S. Senator. On leaving Washington in 1841 he returned to his law practice in Maine. He died at Thomaston in 1874.

1836 ACT OF JULY 4

Vital Changes are Made in the Patent Laws

The Act of 1836 reestablishes the so-called "American" system of granting patents, and creates the machinery for administering the system properly.

With the exception of the original Act of 1790, this is the most important patent law ever enacted by the United States. The patent laws of today, in broader outline, are based upon the principles set forth in this act.

The Act of 1836 reestablishes the "examination" system in effect before 1793. Once again it becomes necessary to determine the novelty and the usefulness of a patent application. Once again the "prior art"—that which has been invented or used before—must be searched to determine whether a patent may be granted. The personnel for conducting this work is provided, and the Patent Office becomes a separate bureau under its own chief. As a result the patent system functions smoothly, the courts are relieved of countless unnecessary patent cases, and a patent becomes a far more valuable asset to its owner.

Some Provisions of the Act of 1836

The Patent Office is established by law as a distinct and separate bureau in the Department of State.

The Office is placed in charge of a chief to be known as the Commissioner of Patents, appointed by the President by and with the approval of the Senate. The Commissioner's salary is $3,000 a year.

The Commissioner is to execute and superintend all matters concerning patents, and is to appoint a chief clerk, an examiner of patents, a machinist, two clerks as draftsmen, an inferior clerk, and a messenger.

To obtain a patent an applicant must file a specification, a drawing, and a model. When issued, the patent is good for 14 years, subject to an extension of 7 years upon the approval of a Board consisting of the Secretary of State, the Solicitor of the Treasury, and the Commissioner of Patents. Reasons for requesting an extension must be presented to the Board.

For the first time appeals are permitted. Should the Examiner of Patents refuse to issue a patent the applicant may take his case to a Board of three disinterested persons appointed by the Secretary of State.

The application fee is $30 for citizens, $500 for British subjects, and $300 for all other aliens. This apparent discrimination results from similar treatment of American citizens in foreign patent offices.

The fees collected by the Patent Office are to constitute the Patent Fund, to be used for clerk hire and other expenses. A register of all patents issued is to be kept.

Employees of the Patent Office are henceforth forbidden to acquire any interest in a patent, except by inheritance or bequest.

The sum of $1,500 is appropriated for the purchase of a library of scientific works and periodicals.

The Commissioner is to provide for the arrangement and classification of models in galleries where they are to be displayed to the public.

For a great many years this display of models was one of the greatest tourist attractions in Washington. After 1880, however, models were no longer required. In later years the historically most interesting of these models were used for exhibition purposes by the Smithsonian Institution, where they may be seen today.

July 4.—A law enacted the same day as the important Patent Act provides for the erection of a new building for the Patent Office.

Henry L. Ellsworth, Superintendent of Patents, is appointed the first Commissioner of Patents.

July 13.—Patent No. 1 issued to John Ruggles, Senator from Maine, who was so largely responsible for the passage of the Act of July 4. The patent, on a Locomotive Steam-Engine for Rail and Other Roads, is "designed to give a multiplied tractive power to the locomotive and to prevent the evil of the sliding of the wheels."

The present system of numbering patents consecutively begins with the patents issued under the new law. Previously issued patents are not numbered.

The Great Fire

December 15.—The Patent Office is completely destroyed by fire. The loss is estimated at 7,000 models, 9,000 drawings, and 230 books. More serious is the loss of all records of patent applications and grants.

After the fire the Patent Office is given quarters in the old City Hall, now the old District Courthouse.

1837 ACT OF MARCH 3

Congress appropriated $100,000 to replace the records and the most valuable and interesting patent models destroyed in the recent fire.

The act requires that two sets of patent drawings be furnished by the inventor, one to be attached to the patent itself and one to be filed at the Patent Office. In this manner a double record—a safeguard against future fires—is kept.

One examiner is added to the Patent Office staff.

A few other changes are made.

A committee is formed to help replace the records lost in the fire. With the help of U.S. court clerks and owners of patents a partial restoration of the records is made in the next few years.

1839 ***January 28.***—President Mirabeau Bonapart Lamar of the Republic of Texas signs "An act securing patent rights to inventors."

Nathaniel Amory, Chief Clerk in the Texas State Department, becomes the first administrator of the act. During his first 11 months in office he grants six patents, mostly concerning inprovements in machinery.

ACT OF MARCH 3

Agriculture a New Job for the Patent Office

Provisions of the Act included the assignment to the Commissioner of Patents the duty of collecting and publishing statistics and other information on agriculture.

For 23 years, until the creation of the Department of Agriculture in 1862, the Patent Office continues this work. The annual reports of the Patent Commissioners during these years devote considerable space to agricultural topics. For many years part of the Patent Office Fund is used for distributing free seeds to farmers.

The Act of March 3 provides that appeals from the Patent Commissioner may be taken to the Chief Justice of the U.S. Court for the District of Columbia.

The Act permits an American inventor to use publicly or sell his article for 2 years before applying for a patent, without forfeiting his right to a patent.

Two assistant examiners are added to the Patent Office staff.

1840 The Patent Office moves into its new home at F and Eighth Streets NW. The building to which wings are added in 1852, 1856, and 1867, becomes the home of the Patent Office for the next 92 years.

June 20.—Samuel F. B. Morse, of New York, receives Patent No. 1,647 for "Telegraph Signs." This is the telegraph, which, by making possible instantaneous communication between far corners of the land, plays an important role in bringing the peoples of the world more closely together.

1842 ACT OF AUGUST 29

Designs Are Made Patentable

"Any person, who by his own industry, genius, efforts and expense, has invented any new and original design" becomes entitled to a design patent. The term of a design patent is 7 years. (By 1965 over 200,000 design patents had been issued.)

The Act of August 29 requires the owner of a patent to mark his article as patented, including the date on which the patent was issued. Any failure to do so results in a $100 fine—one half to go to the informer.

A similar penalty is provided for falsely marking any article as patented.

The Act includes a few additional provisions.

November 9.—George Bruce of New York, N.Y. receives Design Patent No. 1, for Printing Types.

1844 The first Commissioner of Patents, Henry L. Ellsworth, states in his annual report for 1843, while commenting on important inventions which have been made, that "the advancement of the arts, from year to year, taxes our credulity and seems to presage the arrival of that period when human improvement must end." This rhetorical flourish is probably the origin of the unfounded story of the Patent Office official who resigned because everything had been invented.

June 15.—Charles Goodyear of New York receives Patent No. 3,633 for an "Improvement in the Manner of Preparing Fabrics of Caoutchouc or India-Rubber."

The vulcanization of rubber, which Goodyear's process made possible, gives rise to great industries in the years to come.

1845 *Edmund Burke, second Commisioner of Patents, May 7, 1845, to May 10, 1849.*

The Republic of Texas joins the Union. The following year Commissioner Burke urges that steps be taken to validate the patents issued by Texas, but no action appears to have been taken.

The Patent Office technical staff consists of the Commissioner, two examiners, and two assistant examiners. During the year, 1,246 applications are filed.

1846 *September 10.*—Elias Howe, Jr., of Cambridge, Mass., receives Patent No. 4,750 for an "Improvement in Sewing Machines." By inventing a "new and useful machine for sewing seams in cloth or other articles," Howe gives a new stimulus to industry.

1848 ACT OF MAY 27

Congress places in the hands of the Commissioner of Patents the power of extending patents. Since 1836 this power had been vested in a Board consisting of the Secretary of State, the Commissioner of Patents, and the Solicitor of the Treasury.

Two principal and two assistant examiners are added to the Patent Office staff.

A few other changes are made.

1849 ACT OF MARCH 3

The Act of March 3 transfers the Patent Office from the State Department to the newly created Department of the Interior. Not until April 1926 does the Patent Office come under the jurisdiction of the Department of Commerce.

Thomas Ewbank, third Commissioner of Patents, May 10, 1849 to November 8, 1852.

May 22.—Abraham Lincoln, Congressman from Illinois, receives Patent No. 6,469 for "A Device for Buoying Vessels over Shoals."

The invention consists of a set of bellows attached to the hull of a ship just below the water line. On reaching a shallow place the bellows are filled with air, and the vessel, thus buoyed, is expected to float clear. Lincoln whittled the model for his application with his own hands. It can be seen at the National Museum of American History (Smithsonian Institution) in Washington.

When a young man, Lincoln took a boatload of merchandise down the Mississippi River from New Salem to New Orleans. At one point the boat slid onto a dam, and was set free only after heroic efforts. In later years, while crossing the Great Lakes, Lincoln's ship ran afoul of a sandbar. The two similar experiences led him to conceive his invention.

Lincoln's appreciation of inventions was later to be of great service to the Nation. John Ericcson's *Monitor*, the ironclad which defeated the *Merrimac*, would never have been built except for Lincoln's insistence, nor would the Spencer repeating rifle have been adopted by the Army.

ACT OF AUGUST 30

Appeals from the Patent Office may now be made to the Assistant Justices of the U.S. Court for the District of Columbia as well as to the Chief Justice.

1852 *Silas Henry Hodges, fourth Commissioner of Patents, November 8, 1852 to March 25, 1853.*

1853 *Charles Mason, fifth Commissioner of Patents, May 16, 1853 to August 4, 1857.*

Commissioner Mason, for the first time in Government, employs women clerks to work in a Government office. Prior to this time some women had been employed to do clerical work such as copying in their own homes. A great deal of objection was raised to the innovation in the Patent Office, but Commissioner Mason steadfastly adhered to his plans.

1854 *1854-59.*—The Patent Office, in conjunction with the Smithsonian Institution, collects meteorological data from thousands of observers throughout the country. The information is required as part of the agricultural service rendered by the Patent Office before the creation of the Department of Agriculture.

1855 Clara Barton, later founder of the American Red Cross, is employed as a clerk in the Patent Office, at first on a piece-work basis but later at a salary of $1,400 per year, near the top for a clerical salary. Leaving in 1857, she returned to the Patent Office in 1860 and was employed there until 1865.

1856 The Patent Office staff consists of a Commissioner, a chief clerk, 12 examiners, 12 assistant examiners, a draftsman, an agricultural clerk, a machinist, a librarian, and about 50 clerical employees. (In 1988 the total number of Patent and Trademark Office employees is about 3,200.)

1857 *Joseph Holt, sixth Commissioner of Patents, September 10, 1857 to March 14, 1859. Holt afterwards becomes Postmaster General, Secretary of War, Judge Advocate General of the Army, and in 1864 refuses the post of Attorney General.*

The United States issues 2,910 patents—about 35 percent more than Great Britain, which has a far larger population. Prussia grants 48 patents, Russia 24.

1859 *February 5.*—Copyright matters are transferred from the Department of State to the Department of the Interior. The Secretary of the Interior directs the Commissioner of Patents to take charge of the work.

The Patent Office adds a "Librarian of Copyrights" to its staff.

Abraham Lincoln, in a lecture at Springfield, Ill., pays tribute to the patent system: "The patent system added the fuel of interest to the flre of genius." This statement was to be widely quoted in later years.

Willam Darius Bishop, seventh Commissioner of Patents, May 23, 1859 to February 15, 1860. At 31, he is the youngest man ever appointed to this post.

1860

Philip Francis Thomas, eighth Commissioner of Patents, February 16, 1860 to December 10, 1860. He later becomes Secretary of the Treasury.

Commissioner Thomas sets aside one of his ablest examiners to hear and determine interferences. An "interference" is a proceeding for determining who is the original inventor when two or more applicants seek a patent for the same invention at the same time. The one who made the invention first is entitled to the patent.

1861 ACT OF MARCH 2

Patents Now Granted for 17 Years

The Act of 1861 increases the term of a patent grant from 14 to 17 years, at the same time withdrawing the power of the Commissioner of Patents to extend patents.

Prior to this time a patent had been granted for 14 years, but had been extendable for an additional 7 years at the discretion of the Commissioner—thus making possible a total term of 21 years. Congress changes the term of a patent grant to 17 years—a compromise between those in favor of retaining the original 14-year period with extensions and those desiring to abolish extensions.

Among the Other Provisions of the Act:

The penalty for failing to mark articles patented is withdrawn—but unless a manufacturer marks his article patented he cannot obtain damages from a competitor who is illegally copying his product until after notice is given.

The Commissioner of Patents is authorized to appoint additional examiners provided the expense is kept within the income of the Patent Office.

Appeals.—A permanent Board of Appeals, consisting of three Examiners-in-Chief, is created to relieve the Commissioner of much of the burden of hearing appeals. Should an applicant for a patent be unsuccessful before the Board, however, he may still appeal to the Commissioner. The Board is enlarged to five members by the Act of February 15, 1916, to six by the Act of February 14, 1927, to nine by the Act of April 11, 1930, and to 15 by the Act of September 6, 1958.

Design patents.—Design patents may now be issued for terms of 3-1/2, 7 and 14 years, according to the wish of the applicant.

Fees.—The fee for obtaining a patent becomes $35, of which $15 is to be paid at the time of application and $20 when the patent is granted.

The Act eliminates all discrimination in the matter of fees, etc., against foreign applicants, except in the case of citizens of foreign countries discriminating against the United States.

Due to the outbreak of the war there is a great decrease in the activities of the Patent Office. Receipts fall off, and as the statutes forbid a deficit in the Patent Office, a number of minor employees are dismissed and many examiners are reduced in grade.

> *1861-65.*—The war stimulates the use of a number of comparatively new inventions. The field telegraph has an important influence on tactics, machinery is employed on a large scale to manufacture clothes and equipment for the armed forces, and the breech loading rifle is widely used. The importance of the reaper, mower, and thresher in providing food for the armies cannot be overestimated.

David P. Holloway, ninth U.S. Commissioner of Patents, March 28, 1861 to August 16, 1865.

May 21.—The Constitution of the Confederate States of America provides for the establishment of a Patent Office.

Rufus R. Rhodes, of Louisiana, former examiner in the Patent Office at Washington, becomes the first and only Patent Commissioner of the Confederate States. The Patent Office is located in the Mechanics Building at Richmond.

Upon acceptance by the Commissioner, and upon payment of a $40 fee, patents are granted for a 14-year period. The Commissioner's salary is $3,000.

August 1.—The first Confederate patent is issued to one Van Houten of Savannah, Ga., for a "Breech Loading Gun." About one-third of the 266 patents issued by the Confederacy concerned implements of war.

The Confederate Commissioner of Patents finds his work seriously hampered by the lack of reference books. "There is not a polytechnic journal for sale at Richmond," he complains, "and the supply of other books of the kind required by the office is exceedingly limited."

1862 The Federal Congress makes a deficiency appropriation of $50,000 to keep the Patent Office going.

November 4.—Richard J. Gatling, of Indianapolis, Ind., receives Patent No. 36,836 for an "Improvement in Revolving Battery Guns." This is one of the early successful machine guns.

1865 As soon as the war is over there is a noticeable increase in patent applications. This year there are 10,000 applications (almost double the number of 1864); in 1866 15,000 applications; and in 1867, 20,000. Until 1880 the number of annual applications is approximately 20,000.

Thomas C. Theaker, tenth Commissioner of Patents, August 16, 1865 to January 20, 1868.

ACT OF JULY 20

Congress directs the Commissioner of Patents to turn over to the Treasury the Patent Fund hitherto kept at his disposal for Patent Office expenditures. All money received by the Patent Office for its

services is subsequently paid directly to the Treasury, and the expenses of the Office, like those of other Government departments, are met by congressional appropriations.

1868 *June 23.*—Patent No. 79,265 granted to Christopher L. Sholes and others, for a Typewriter.

Elisha Foote, eleventh Commissioner of Patents, August 1, 1868 to April 25, 1869.

1869 *April 13.*—George Westinghouse, Jr., of Schenectady, N.Y., receives Patent No. 88,929 for an "Improvement in Steam-Power Brake Devices." This is the famous Westinghouse Air Brake which is to make possible the safe speeding up and lengthening of trains, thus reducing transportation costs and enabling the railroads to handle the vast traffic essential to modern industrial civilization.

Samuel Sparks Fisher, twelfth Commissioner of Patents, April 26, 1869 to November 10, 1870.

Adoption of Merit System by the Patent Office

Commissioner Fisher introduces the merit system for selecting appointees to the technical staff of the Patent Office. By requiring candidates to pass rigid competitive examinations the Patent Office anticipates the civil service system by a number of years.

On his own initiative, Fisher contracts to have 10 copies of each drawing in the Patent Office reproduced by photolithography. The law requires an applicant to furnish one drawing for the use of the Patent Office, but some drawings have been in the Office for 30 years and are almost in tatters due to constant handling.

Fisher then orders all drawings to conform to a uniform standard—to simplify the process of reproduction. (The specifications and drawings of all patents thereafter granted are issued in printed form. The specifications and drawings of previously issued patents are reproduced in printed form from time to time until all issued since July 1836 are printed.)

Commissioner Fisher takes active steps to revise the patent laws and organize Patent Office procedure on sounder lines. As a result of his efforts the important Patent Act of July 1870 is passed.

1870 **ACT OF JULY 8**

The Most Important Patent Act Since 1836

The Act of July 8 consolidates the 25 acts and parts of acts concerning patents passed in the last 34 years, and includes a number of new provisions. The numerous sections of the Act serve to reorganize and revise the patent laws.

Among the more important new provisions in the Act are the following:

Trademarks.—The Commissioner of Patents is given jurisdiction to register trademarks and the power to make appropriate rules and regulations concerning them. This is the first law enacted by Congress concerning trademarks.

Copyrights.—The Librarian of Congress is made custodian of all records and matters concerning copyrights.

Models.—Models are to be furnished, but only when required by the Commissioner.

This was a tremendous aid in simplifying Patent Office procedure. Due to greater technical progress models were in most cases unnecessary—drawings and descriptions were sufficient. The saving in money to applicants was naturally a great advantage. Until about 1880 however, Patent Commissioners continued to require models in many cases.

Appeals—Appeals from decisions of the Patent Commissioner are to go to the Supreme Court of the District of Columbia sitting as a body rather than to individual justices of the court as has been the practice heretofore.

Interferences.—The duties of the Examiner of Interferences are defined and legal status thus given to an office previously created by the Commissioner.

The Examiner of Interferences determines questions of priority when two inventors apply for a patent for the same invention at the same time.

Other provisions.—The Commissioner of Patents is given the power to make rules and regulations, not inconsistent with law, concerning the conduct of proceedings in the Patent Office—subject to the approval of the Secretary of the Interior.

Authority is granted to the Commissioner to disbar any patent agent from practice for misconduct.

The Commissioner is authorized to print copies of the current issues of patents, and to publish copies of laws, decisions, and rules for the information of the public.

Increases are made in the personnel of the Office and salaries of some of the examiners are raised.

The office of Assistant Commissioner is created. The Office of First Assistant Commissioner is created by the Act of March 4, 1909; an additional Assistant Commissioner is authorized by the Act of April 11, 1930.

July 12.—John W. Hyatt, Jr., and Isaiah S. Hyatt, of Albany, N.Y., receive Patent No. 105,338 for "Improvements in Treating and Molding Pyroxyline." From this invention springs the great celluloid industry, supplying toilet articles, camera film, and thousands of other articles.

The appropriation for the next fiscal year provides for the appointment of an Assistant Commissioner.

1871 *January 11.*—Congress orders the discontinuance of the old Patent Office Reports and directs the Commissioner to have copies of patents printed, some for free distribution to libraries and others to be offered for sale to the public.

For the first time printed patent specifications become available to the public at a nominal charge. Hitherto, in order to study the patents, it had been necessary to consult the original drawings and specifications in the Patent Office or have copies made at considerable expense.

Gen. Mortimer D. Leggett, thirteenth Commissioner of Patents, January 16, 1871 to October 31, 1874.

December 19.—Mark Twain (Samuel L. Clemens) receives Patent No. 121,992 for "An Improvement in Adjustable and Detachable Straps for Garments." Twain, who later lost a fortune in investing money in the inventions of others, actually received three United States patents, the second in 1873 on his famous "Mark Twain's Self-Pasting Scrapbook," and the third in 1885 for a game to help players remember important historical dates.

The scrapbook, on which he made a sizable profit, was simply a series of blank pages coated with gum or veneer. The sale of 25,000 copies during the first royalty period led one of Twain's biographers to remark that this "was well enough for a book that did not contain a single word that critics could praise or condemn."

In his *Connecticut Yankee at King Arthur's Court,* Twain's character "Sir Boss" remarked that "a country without a patent office and good patent laws is just a crab and can't travel anyway but sideways and backways."

1872 ***January 3.***—The first *Official Gazette of the United States Patent Office* is issued. Published weekly thereafter, it has systematically recorded excerpts from patents, the more important decisions concerning Patent Office practice and related matters.

1873 ***January 28.***—Louis Pasteur, of Paris, France, founder of the modern science of bacteriology, receives Patent No. 132,245, for "Improvements in the Process of Making Beer." On July 22 he receives Patent No. 141,072, for "Improvements in the Manufacture and Preservation of Beer and in the Treatment of Yeast and Wort, Together With Apparatus for the Same." These patents involve some of Pasteur's fundamental discoveries.

April 29.—Eli H. Janney, of Alexandria, Va., receives Patent No. 138,405 for "Car Couplings". Janney's automatic car coupler, together with Westinghouse's air brake, makes possible the gigantic railroad industry of the twentieth century. Without the car coupler the toll of railroad accidents would be appalling. The Appropriation Act of 1873, in its provisions for assistant examiners states that two of these positions may be held by women.

July 8.—Anna R. G. Nichols, of Melrose, Mass., becomes the first woman patent examiner.

1874 **ACT OF JUNE 18**

The Patent Office is given charge of the registration of copyrights for prints and labels for articles of manufacture.

John Marshall Thacher, fourteenth Commissioner of Patents, November 1, 1874 to September 30, 1875.

November 24.—Joseph F. Glidden, of De Kalb, Ill., receives Patent No. 157,124, for an "Improvement in Wire Fences." His improvement becomes known as barbed wire, and makes possible the cheap and efficient fencing of vast areas of western farm lands.

1875 The Patent Office staff numbers 351. Of this number 24 are principal examiners, 24 first assistant examiners, 24 second assistant examiners, and 24 third assistant examiners.

Robert Holland Duell, fifteenth Commissioner of Patents, October 1, 1875 to December 31, 1876.

1876 Centennial Exhibition held at Philadelphia. The wonders of the industrial progress of the last century are shown to the public.

March 7.—Alexander Graham Bell, of Salem, Mass., receives Patent No. 134,465 on "Telegraphy." Actually this is the invention in electrical communication known as the telephone.

A Swiss shoe manufacturer and commissioner to the Philadelphia Centennial Exhibition is impressed with the American Patent System. On returning home he tells his countrymen, "We must introduce the patent system. America has shown us how. May our sister republic serve as our model in this." Switzerland subsequently introduces a patent system in 1888. Albert Einstein later becomes an examiner in the Swiss Patent Office.

1877 *Ellis Spear, sixteenth Commissioner of Patents, January 29, 1877 to October 31, 1878.*

September 24.—Fire breaks out in part of the Patent Office and destroys many models, but the important records of the Office are saved.

1878 *February 19.*—Thomas A. Edison, of Menlo Park, N.J., receives Patent No. 200,521 for a "Phonograph or Speaking Machine." (Edison obtained 1,093 patents, four being issued posthumously.)

Gen. Halbert Eleazer Paine, seventeenth Commissioner of Patents, November 1, 1878 to May 6, 1880.

1879 The Supreme Court declares the Trademark Law of 1870 unconstitutional, on the ground that the patent provision in the Constitution is not broad enough to cover trademarks and that the law is not based on the interstate commerce provision in the Constitution.

1880 *January 27.*—Thomas A. Edison, of Menlo Park, N.J., receives Patent No. 223,898 for "An Electric Lamp for Giving Light by Incandescence."

Edgar M. Marble, eighteenth Commissioner of Patents, May 7, 1880 to October 31, 1883.

1881 ACT OF MARCH 3

New Trademark Law

Provision is made for the registration by the Patent Office of trademarks used in commerce with foreign nations and with the Indian tribes. The law makes no provision, however for the registration of marks used in interstate commerce, and therefore is of little value.

This year inaugurates one of the greatest decades of invention of all time. The trolley car, the incandescent light, the automobile, the cash register, the dynamo, the pneumatic tire, smokeless powder, transparent film, electrical welding, the cyanide process, the steam turbine, the aluminum manufacturing process, and the electric furnace are all invented or introduced during the next 10 years.

1883 *Benjamin Butterworth, nineteenth Commissioner of Patents, November 1, 1883 to March 3, 1885; April 13, 1897 to January 16, 1898.*

1885 The number of employees of the Patent Office passes 500.

Martin V. B. Montgomery, twentieth Commissioner of Patents, March 18, 1885 to April 11, 1887.

July 14.—Sarah E. Goode is the first black woman to obtain a United States Patent. She receives Patent No. 322,177 for a Folding Cabinet Bed.

1886 *August 10.*—Elihu Thomson, of Lynn Mass., receives Patent No. 347,140 for "Apparatus for Electrical Welding." This process supplants riveting and brazing in many instances—as in structural ironwork, ship building, etc.

1887 The United States becomes a member of the International Convention for the Protection of Industrial Property (patents and trademarks), formed in Paris in 1883.

(This convention, revised in 1890, 1897, 1911, 1925, 1958 and 1967, has 98 countries as members by 1988. It becomes an important instrumentality for protecting the patent and trademark rights of Americans in foreign countries and of foreigners in the United States. Each member of the Convention gives to nationals whose governments belong to the Convention the rights it gives to its citizens.)

Hundreds of thousands of words of testimony are taken in one of the most memorable hearings in the entire history of the Patent Office. The country's most distinguished lawyers argue the cases of *McDonough v. Gray v. Bell v. Edison* to determine the original inventor of the telephone. Nationwide attention is attracted to the numerous hearings, which continue over a period of 2 years.

Bell's claims are completely substantiated.

Benton J. Hall, twenty-first Commissioner of Patents, April 11, 1887 to March 31, 1889.

1888 ***May 1.***—Nikola Tesla of New York receives Patent No. 382,280 for the "Electrical Transmission of Power." This invention is the genesis of the induction type of electric motor, so widely used in modern industry.

1889 *Charles Elliott Mitchell, twenty-second Commissioner of Patents, April 1, 1889 to July 31, 1891.*

April 2.—Charles M. Hall, of Oberlin, Ohio, receives Patent No. 400,665 for the "Manufacture of Aluminum." This light, strong metal becomes an indispensable requirement of numerous industries.

1890 *September 16.*—Ottmar Mergenthaler, of Baltimore, Md., receives Patent No. 436,532 for a "Machine for Producing Linotypes, Type Matices, etc." The cheap and rapid reproduction of newspapers, books, and magazines is largely dependent on Mergenthaler's invention of the linotype.

One-third of the 157 assistant examiners in the Patent Office are graduates of technical schools. (At present almost every examiner has a scientific or engineering degree and many have law degrees as well.)

1891 *April 8, 9, 10.*—The Congress of Inventors and Manufacturers of Inventions to Celebrate the Beginning of the Second Century of the American Patent System meets in Washington for 3 days of gala festivities. Prof. Alexander Graham Bell, inventor of the telephone, is among the distinguished guests.

Circuit Courts of Appeals are established in the United States to relieve the burden on the Supreme Court.

William Edgar Simonds, twenty-third Commissioner of Patents, August 1, 1981 to Apirl 15, 1893. As a Congressman, Simonds obtained passage of the first International Copyright Act of the United States.

1893 *April 11.*—Frederic E. Ives, of Philadelphia, receives Patent No. 495,341 for a "Photogravure Printing Plate." The cheap, rapid reproduction of illustrations for newspapers, magazines, and books is made possible by this invention. The process of reproduction becomes known as "half-tone printing."

August 29.—Patent No. 504,038 granted to Whitcomb L. Judson for Slide Fastener (now commonly known as the Zipper).

The Court of Appeals for the District of Columbia is esbalished. Appeals in patent cases are taken direct from the Commissioner of Patents to this court.

John S. Seymour twenty-fourth Commissioner of Patents, April 16, 1893 to April 12, 1897.

1896 *May 19.*—Edward G. Acheson, of Monongahela City, Pa., receives Patent No. 560,391 for an "Electrical Furnace." The furnace makes possible the production of an artificial material known as Carborundum, which is one of the hardest substances known and is widely employed in industry for its fast cutting qualities.

1897 *Benjamin Butterworth, Commissioner of Patents, a second term, April 13, 1897 to January 16, 1898. Prior to his first service as 49th and 47th Congresses. He returned to Congress for three additional terms from 1885 to 1891, being named Chairman of the House Patents Committee in the 51st Congress.*

April 20.—Simon Late, famous American pioneer in submarine development, receives Patent No. 581,213 for "New and Useful Improvements in Submarine Vessels."

July 13.—Guglielmo Marconi, a subject of the King of Italy, receives Patent No. 586,193 for "New and Useful Improvements in Transmitting Electrical Impulses and Signals and in the Apparatus Thereof. . . by means of oscillations of high frequency." In other words, wireless telegraphy.

1898 *November 23.*—Andrew Jackson Beard receives Patent No. 594,059 for a railway car coupler. Born a slave, Beard worked in a number of occupations, including the railroad industry. This led to his improved coupler which was credited with preventing many serious injuries and fatalities among railroad workers.

Charles Holland Duell, twenty-fifth Commissioner of Patents (Butterworth's second term being separately counted), February 5, 1898 to March 31, 1901. Duell was the son of Robert Holland Duell, fifteenth Commissioner of Patents. In 1904, he was appointed by President Theodore Roosevelt to be an Associate Justice on the U.S. Court of Appeals for the District of Columbia, serving until 1906.

June 10.—Congress authorizes the establishment of a Classification Division to reclassify all patents, foreign patents, scientific publications, etc. to make it easier for the examiners and the public to determine the novelty of an application. This act materially speeds up the work of the Patent Office.

August 9.—Rudolph Diesel of Berlin, Germany, receives Patent No. 608,845, for "New and Useful Improvements in Internal-Combustion Engines."

August 30.—Henry Ford, of Detroit, Mich., receives Patent No. 610,040 for "New and Useful Improvements in Carburetors . . . especially designed for use in connection with gas or vapor engines." In 1901 he receives Patent No. 686,046 for "New and Useful Improvements in Motor-Carriages." Ford was granted a total of 161 U.S. patents.

1899 *March 14.*—Ferdinand Zeppelin, of Stuttgart, Germany, receives Patent No. 631,195 for "Improvements in and Relating to Navigable Balloons."

1900 About this time a Japanese commissioner, in Washington to study the American patent system, states: "We have looked about us to see what nations are the greatest, so that we can be like them * * * We said, 'What is it that makes the United States such a great nation?' and we investigated and found that it was patents, and we will have patents."

Since 1809 approximately 1 out of every 1,000 patents has been issued to a woman inventor.

1901 *November 19.*—Granville T. Woods receives Patent No. 687,098 for a third rail to operate electrified railways. This black inventor from Columbus, Ohio, dedicated his life to developing a variety of inventions relating to the railroad industry and held more than 60 patents.

Frederick Innes Allen, twenty-sixth Commissioner of Patents, April 1, 1901 to May 31, 1907.

1904 *August 2.*—Michael J. Owens, of Toledo, Ohio, receives Patent No. 766,768 for a "Glass Shaping Machine." The immense production of glass bottles, jars, etc., owes its inception to this invention.

1905 **TRADEMARK ACT OF FEBRUARY 20**

Trademarks Achieve a New Value

This act, by authorizing the registration of trademarks used in *interstate* commerce (as well as in commerce with foreign nations and with the Indian tribes), becomes of vital importance to American business. Under the protection of this act great industries are built up on the goodwill of a name.

1906 *May 22.*—Orville and Wilbur Wright, of Dayton, Ohio, receive Patent No. 831,393, for certain "New and Useful Improvements in Flying-Machines."

1907 *Edward Bruce Moore, twenty-seventh Commissioner of Patents, June 1, 1907 to August 14, 1913. He began his career as a Senate page.*

1908 Various changes are made in the patent laws.

1909 **ACT OF MARCH 4**

The Office of First Assistant Commissioner is Created.

December 7.—Leo H. Baekeland, of Yonkers, N.Y., receives Patent No. 942,809 for "New and Useful Improvements in Condensation Products and Method of Making Same." Bakelite is the direct result of this invention, and the modern plastics industry—producing thousands of articles for industrial and home use—is greatly indebted to Baekeland's discoveries.

Caveats, established by the Act of 1836, are abolished. A caveat was written notice to the Patent Office from an inventor who was not yet prepared to file his application, and gave him the right for a period of 1 year to be notified if someone else applied for a patent for the same invention.

1911 *August 8.*—Patent No. 1,000,000 is issued (to Francis H. Holton, Sumnmit, Ohio, for Vehicle Tire).

1913 *Thomas Ewing, twenty-eight Commissioner of Patents, August 15, 1913 to August 15, 1913 to August 15, 1917. He was the grandson of Thomas Ewing, first Secretary of the Interior (1849).*

1917 The call to arms and the high salaries paid by private industries cause many members of the Patent Office staff to take up other duties. As a result it soon becomes necessary to dispense with full civil service

requirements in order to induce people to enter the Office. Patent Office salaries remain low while those in private industry reach new heights.

An Army and Navy Patent Board is organized at the Patent Office to determine the possible military value of new patent applications.

An Act of Congress gives the Federal Trade Commission, and later the Commissioner of Patents, the power to order kept secret and withhold from publication any invention disclosed in a patent application whose disclosure might "be detrimental to the public safety * * * assist the enemy, or endanger the successful prosecution of the war."

During the war about 2,100 applications—of which some 1,000 were patentable—were kept secret under these laws.

Thomas Ewing, former Commissioner of Patents, is named Chairman of the Munitions Patent Board of the War and Navy Departments.

The Patent Office Society is formed. Composed principally of members of the examining corps of the Patent Office, its purpose is "to promote and foster a true appreciation of the American Patent System." In 1918 the society begins to publish the *Journal of the Patent Office Society*, a monthly organ devoted to patent matters, which is still being published.

James T. Newton, twenty-ninth Commissioner of Patents, August 27, 1917 to July 19, 1920. Coming "up from the ranks," Newton joined the Patent Office in 1891 and served as fourth assistant examiner, third assistant examiner, law clerk, chief clerk, primary examiner, Assistant Commissioner, First Assistant Commissioner, and Examiner-in-Chief prior to his appointment as Commissioner.

1918 The Patent Office is inadequately staffed to handle the immense amount of business which comes in following the Armistice.

1919 One hundred two patents are issued to John F. O'Connor of Chicago during this year.

1920 The number of employees of the Patent Office passes 1,000.

March 19.—A new trademark act is passed making certain additions to the Trademark Act of 1905. Provisions are made for compliance with an Inter-American trademark treaty and for the registration of certain marks which could not be registered under the prior act.

Robert Frederick Whitehead, thirtieth Commissioner of Patents, August 10, 1920 to February 5, 1921.

1921 **ACT OF MARCH 3**

The Nolan Act gives foreign inventors desiring United States patents certain benefits in matters regarding time of application, fees, etc., in order to alleviate difficulties caused by the war. The act is reciprocal, granting these benefits only to nationals whose governments give United States citizens similar privileges.

March 1.—Harry Houdini, the magician, receives Patent No. 1,370,316 for a "Diver's Suit," enabling the wearer "to quickly divest himself of the suit while being submerged and to safely escape and reach the surface of the water." Whether Houdini used this in any of his famous tricks is unfortunately not recorded in the Patent Office.

During the last 15 years approximately 1.5 percent of all United States patents have been issued to women inventors.

Melvin H. Coulston, thirty-first Commissioner of Patents, March 3, 1921 to April 5, 1921.

Thomas E. Robertson, thirty-second Commissioner of Patents, April 6, 1921 to June 25, 1933.

1922 ACT OF FEBRUARY 18

The Commissioner of Patents is given the power to require patent agents and patent attorneys to have certain qualiflcations before being allowed to practice before the Patent Office. He is also authorized to suspend or disbar such persons for cause.

The salaries of the Commissioner and other officers of the Patent Office are increased, and 49 more positions are created on the technical staff. The fee for filing a patent application is increased from $15 to $20.

The office of Solicitor is created.

The Patent Office begins to publish circulars of general information concerning patents, trademarks, etc.

1923 Some of the Examining Divisions of the Patent Office are moved to the old Land Office Building, which was built on the site of Blodgett's Hotel, one of the earliest homes of the Patent Office.

The Appropriation Act of January 24, allows for 45 additional technical and 40 additional clerical employees.

November 20.—Garrett Morgan receives Patent No. 1,475,024 for his traffic signal, the forerunner of the modern "stop light."

1925 Congress appropriates $10,000 for the work of removing some 150,000 old Patent Office models—relics of the days before 1880 when a model was required as part of a patent application. Some are transferred to the U.S. National Museum (Smithsonian Institution), others are returned to the original inventors or their relatives, and still others are sold at public auction.

George Washington Carver receives Patent No. 1,541,478 for his "paint and stain process." This was one of several patents obtained by Dr. Carver, born into slavery and famous for his agricultural reseach work at Tuskegee Institute where he developed 300 products from peanuts, 118 products from sweet potatoes and 60 products from pecan nuts.

1926 *April 1.*—The Patent Office is transferred to the Department of Commerce by Executive Order.

The Patent Office conducts an exhibit at the Philadelphia Sesquicentennial Exposition. Thousands of visitors see a collection of old Patent Office models and show interest in the patent system.

1927 *March 2.*—The time for response to Patent Office actions is reduced from 1 year to 6 months and the appeal procedure is revised.

1928 Congress passes a special act providing for extending the patents of certain war veterans. Only six mechanical patents are extended.

1929 Patent appeals, which since 1893 have been taken to the Court of Appeals of the District of Columbia, are transferred to the U.S. Court of Customs and Patent Appeals. This court, in existence for many years as the Court of Customs Appeals, assumes the new duties of hearing patent appeal cases direct from the Patent Office.

1930 The Patent Office is still a year behind in its work.

ACT OF APRIL 11

Application and issue fees are raised from $20 to $25.

One hundred and twenty additional examiners are provided for.

The number of Examiners-in-Chief is raised to nine, and provision is made for another Assistant Commissioner.

Due to the pressure of business, the number of Interference Divisions is increased from one to three.

ACT OF MAY 23

Plants Are Now Patentable

For the first time since 1842, an addition is made to what constitutes patentable subject matter. A patent may now be obtained by anyone "who has invented or discovered and asexually reproduced any distinct and new variety of plant other than a tuber-propogated plant." Designed to help agriculture by stimulating the invention of new types of plants, the act has the approval of such notable men as Luther Burbank and Thomas Edison. Edison, in urging the passage of the bill, had stated that "nothing Congress could do to help farming would be of greater value and permanence than to give the plant 3 breeder the same status as the mechanical and chemical inventors now have through the patent law."

The Department of Agriculture is to help the Patent Office in determining the patentability of a plant. The word "asexual" is included in order to prevent a monopoly on the cereal grains, and the limitation "other than tuber-propagated" to prevent a monopoly on potatoes, etc. No plant already known to the public prior to the passage of the act can be patented.

One supporter of the act states that "the production of a new plant often requires more patience, skill, ingenuity, resourcefulness, knowledge and observation than the making of a mechanical invention."

November 11.—Albert Einstein of Berlin, Germany, receives, with his coinventor, Patent No. 1,781,541 for "An Apparatus for Producing Refrigeration."

1931 *August 18.*—Plant Patent No. 1 is issued to Henry F. Bosenberg, of New Brunswick, N.J., for "a climbing rose * * *characterized by its everblooming habit."

1932 Application and issue fees for patents are increased to $30.

The Patent Office moves to the Department of Commerce Building, taking up over 8 acres of office space. The task of moving the Patent Office records requires 4 months' time. The old Patent Office building is taken over by the Civil Service Commission.

1933 *Conway P. Coe, thirty-third Commissioner of Patents, June 26, 1933 to June 15, 1945.*

July.—The Secretary of Commerce appoints a Patent Office Advisory Committee to assist him in matters of general policy.

Loyd H. Sutton of Washington is the first chairman. The committee members include representatives of industry, general law, and patent law.

1934 Florence E. Allen of Ohio is appointed to the U.S. Circuit Court of Appeals and becomes the first woman to sit as a judge in patent cases.

1935 *April 30.*—Patent No. 2,000,000 is issued (to Joseph Ledwinka, Philadelphia, Pa., for Vehicle Wheel Construction).

1936 *June 16.*—Design Patent No. 100,000 is issued.

The centennial of the Patent Act of 1836 is celebrated. The Patent Office Society presents the Patent Office with a bronze bust of Thomas Jefferson.

1937 *December 7.*—Alfred E. Ischinger of Mount Penn, Pa., receives the largest patent heretofore granted by the Patent Office. The patent, on "Uninterrupted Knitting of Shaped Fabrics," includes 170 sheets of drawings and 146 pages of specifications.

1939 *July 31.*—The registration of copyrights for prints and labels is transferred from the Patent Office to the Library of Congress, effective July 1, 1940. This ends the connection of the Patent Office with copyright matters.

August.—Following the hearings before the Temporary National Economic Committee, when the Commissioner of Patents made various recommendations for changes in the patent laws, five acts designed to expedite the issuance of patents and to simplify the patent laws in certain respects are passed.

One act changed the 2 year priority period to 1 year effective August 5, 1940, 1 year after the date of enactment; one act created a board of

interference examiners to decide priority contests; one act authorized the Commissioner of Patents optionally to reduce the time for response to an Office Action to not less than 30 days; and one act abolished renewals and authorized delayed payment of a final fee.

1940 *April 10.*—President F. D. Roosevelt, pursuant to a Resolution of Congress, designated this day as "Inventors' and Patent Day" to commemorate the sesquicentennial anniversary of the signing of the first patent act.

Addresses of commemoration are made in the Senate by Senator Homer T. Bone and in the House of Representatives by Congressmen Charles Kramer and Fred A. Hartley, Jr.

Many special celebrations including radio programs, dinners, and the like, are held in different parts of the country at about this time. The National Association of Manufacturers sponsors a series of "Modern Pioneer" dinners at which some 500 living American inventors are honored for their contributions to the progress and high standard of living of this country and presented with Modern Pioneer Awards.

Under a commission set up by Congress, a National Patent Law Sesquicentennial Committee is formed. Dr. Charles F. Kettering is general chairman and Thomas Midgley, inventor of Ethyl gasoline head of the executive committee; famous inventors and scientists are among its members. It stages, through employees of the Patent Office, a "Parade of Progress," an exhibit of modern inventions, in the Department of Commerce auditorium. The celebration is climaxed by a gigantic banquet at the Mayflower Hotel in Washington.

July 1.—Congress passes an act giving the Commissioner of Patents temporary authority to order defense inventions to be kept secret. Amended from time to time, this authority is now a permanent part of the patent law.

1941 *December 7.*—Pearl Harbor attacked. United States enters World War II.

December 12.—President F. D. Roosevelt, by executive order, establishes a National Patent Planning Commission to study the American Patent System and make recommendations for its improvement. The members appointed are Charles F. Kettering, Owen D. Young, Chester C. Davis, Edward F. McGrady and Francis P. Gaines. Three reports are issued, one in 1943 and two in 1945, even though operating funds are denied by Congress.

1942 *January 31.*—The bulk of the Patent Office begins to move to Richmond, Va. All the examining divisions and many of the associated service divisions are moved leaving only a minor portion of the Patent Office in Washington. The Richmond branch of the Patent Office is located at 900 North Lombardy Street for the next 5 years.

The staff of the Patent Office declines during the year, the number of assistant examiners dropping from 516 at the beginning to 430 at the end. The decline continues and the number of assistant examiners

remains at slightly over 400 for the next 3 years. Many employees enter the armed services, the number in service reaching 250.

November 10.—Dr. Charles R. Drew, a black physician from Washington, D.C., receives Patent No. 2,301,710, "Apparatus for Preserving Blood." His method of preseving blood aided in the treatment of thousands of soldiers during World War II. He later became the first director of The American Red Cross Blood Bank.

1943 A patent exceeding in size the Ischinger patent of 1937 is granted to John H. Voss for Telephone System, No. 2,320,548; containing 174 sheets of drawings, 220 pages of specification, totaling 394 pages.

1945 *Casper W. Ooms, thirty-fourth Commissioner of Patents, July 20, 1945 to September 9, 1947.*

September 2.—Hostilities ended in the Pacific area; in the European area on May 8.

1946 *January.*—Some of the examining divisions are moved back to Washington.

July 5.—Act of Congress changes fee for printed copies of patents from 10¢ to 35¢.

TRADEMARK ACT OF JULY 5

A new trademark law, commonly known as the Lanham Act, is enacted. This law, which came into effect on July 5, 1947, repealed prior trademark laws and made a number of significant changes. Some of the changes are: provisions for registering service marks and certification marks; incontestability of trademark registrations under certain conditions; cancellation of registrations after the sixth year if an affidavit of use is not filed during the six years; and many others. Registrations under this Act are numbered beginning with 500,001 dated December 30, 1947; the last registration under the Act of 1905 was numbered 444,811 and dated June 19, 1946.

August 1.—The Atomic Energy Act, for the control of atomic energy, becomes law. Inventions for the production of fissionable material and the military utilization of atomic energy are excluded from the scope of the patent law.

August 8.—Congress passes war moratorium legislation with respect to patents. This act provides for the extension of times for doing various acts in connection with patent applications in favor of citizens of foreign countries which grant similar rights to American citizens. By means of similar legislation in other countries Americans are enabled to preserve their patent rights in over 25 foreign countries.

September.—All the units of the Patent Office remaining in Richmond, Va., begin move to temporary quarters at Gravelly Point outside Washington.

The postwar surge in the number of patent applications filed results in 91,972 applications filed this year.

Patent Office begins recruiting of additional staff to build up force depleted during the war.

1947 *February.*—The parts of the Patent Office at Gravelly Point begin moving back to the Department of Commerce Building. The entire Patent Office is together again, although scattered about the building and in very cramped quarters.

August 6.—In view of the peace treaties signed with Italy, Bulgaria, Hungary, and Rumania, legislation is enacted resuming normal patent relations with these countries. Nationals of Germany and Japan are also permitted to obtain patents in this country, but qualified to exclude inventions made during the war period.

Lawrence C. Kingsland, thirty-fifth Commissioner of Patents, September 10, 1947 to December 1, 1949.

1948 *June 30.*—Total number of patent applications pending in the Patent Office reaches 233,000, of which 148,000 are awaiting action by the examiner. The Office is far behind in its work, many of the examining divisions being over 2 years behind in reaching an application for action.

Recruiting of additional staff continues, the number of assistant examiners is brought up to 780 by the end of the year and the total personnel to 1970.

1949 *March 1.*—New Patent Office Rules of Practice take effect. For the first time in over 50 years the Rules of Practice of the Patent Office have been completely revised. A committee of Patent Office employees produced a draft which was published and the comments and suggestions of the public invited. A public hearing was held in September 1948 and the new rules were promulgated on December 31. Besides changing the arrangement and language of the rules to make them easier to understand, a number of changes in procedure were introduced.

John A. Marzall, thirty-sixth Commissioner of Patents, December 2, 1949 to February 3, 1953.

1950 *June 30.*—An act providing for the extension of the term of patents of veterans of World War II is passed. Under this act, which allowed one year to apply for an extension, 107 patents were extended; under an amendatory act of July 1, 1952, which enlarged the definition of "sole owner" to include the interest of a spouse, 6 additional patents were extended, making a total of 113 patents extended under the Veterans Patent Extension Act.

Great progress is made in reducing the number of cases on hand and making the Office more current. At the beginning of the year 5 of the examining divisions were still over 2 years behind and 44 of the 70 divisions were over 15 months behind.

At the end of the year not one examining division is over 13 months behind. At the beginning of the year there were 135,000 applications on

hand waiting action by the examiners, which number was reduced to 121,000 at the end of the year.

1951 Progress in catching up on the work continues. All examining divisions are not over 10 months behind in reaching cases for action and the number of applications awaiting action by the examiners is 105,000.

1952 *July 19.*—President Truman signs a new act revising and codifying the patent laws. For the first time since 1830, the patent laws are completely rewritten in one act with changes in arrangement and language making the law comparatively easy to understand; many changes in procedure and substance, primarily of noncontroversial nature are also made. In January 1950, the Committee on the Judiciary of the House of Representatives published a preliminary draft of a proposed revision of the patent laws, requesting suggestions and comments. This was widely circulated and a bill, formulated after consideration of the response by the public, was introduced July 17. This bill in turn was widely circulated and reintroduced in revised form April 18, 1951. Public hearings were held in June as a result of which the bill was further revised before being enacted. The new law came into effect on January 1, 1953.

Despite some loss of staff, gains on the backlog continued. The number of applications on hand awaiting action by the examiner at the end of the year is 95,000 and no division is over 9 months behind.

Robert C. Watson, thirty-seventh Commissioner of Patents, February 18, 1953 to March 1, 1961.

1953 *August 11.*—Mrs. Robert W. (Daphne) Leeds takes oath of office as Assistant Commissioner, being the first woman appointed to that position.

1954 *August 23.*—Congress extends to Japanese and German nationals rights of priority and other benefits of the war moratorium legislation of August 8, 1946.

August 30.—Enactment of the Atomic Energy Act of 1954 revises and replaces the first comprehensive law enacted in 1946; makes important changes in patent provisions, the prohibition of the patenting of inventions in the production of fissionable materials is removed, but the prohibition of the patenting of atomic energy weapons is retained.

September.—Secretary of Commerce Weeks announces formation of an Advisory Committee on Application of Machines to Patent Office Operations. The report of the Committee, recommending initiation of research and development on the subject, is published in December. The Patent Office has commenced study of the problems involved.

October 12 to November 5.—Exhibit of Electronic Inventions, the first in a series of exhibits illustrating technological advances made by inventors and companies inspired by the American Patent System is held in the main lobby of the Commerce Building in Washington, D.C. This exhibit inaugurated a continuing annual program of affording a media through which industry could participate in bringing to the

attention of the public the many mutual benefits enjoyed under the patent system and to generate better understanding of the incentives this system affords and the opportunities still available. Exhibitors have shown their inspiring displays at sales shows and conventions throughout the United States and thereby contributed further to public education concerning an important function of their National Government.

1955 *March 10-16.*—A plant patent exhibit is presented at the National Capital Flower and Garden Show, commemorating the 25th anniversary of the Plant Patent Act. In addition to patent matters, numerous varieties of growing flowers, fruits, and plants covered by patents obtained under this act are exhibited.

May 11.—A subcommittee of the Senate Committee on the Judiciary is granted by Senate Resolution 92, 84th Congress, authority and funds "for an examination and review of the administration of the Patent Office and of the statutes relating to patents, trademarks, and copyrights." The subcommittee made a preliminary report on January 30, 1956, and has continued its work under yearly resolutions of the Senate since that time. Over 50 papers dealing with facets of the investigation and work of the subcommittee have been printed.

May 17.—Patent No. 2,708,656 for "Neutronic Reactor" is issued on an application filed December 19, 1944, by Enrico Fermi and Leo Szilard.

June.—Reductions in appropriations for the fiscal years 1953, 1954, and 1955 below the amounts for each preceding year, coupled with increased printing and salary costs, and increased filing of applications result in the office falling behind in its work. By the end of June the total number of patent applications pending in the Office has exceeded 220,000, of which 139,000 are awaiting action by the examiner. The average length of time between the filing of an application and the issuance of a patent is 3 years and 6 months.

June 30.—Congress appropriates $14 million for operation of the Patent Office for the fiscal year July 1, 1955-June 30, 1956, the largest appropriation in history. The allowance of this amount approves expansion of the examining staff to initiate a program extending over a number of years to reduce the backlog of pending applications to a reasonable figure, perfect the classification of patents, and effectuate other improvements in Patent Office operations.

1956 *May 28th through June 2d.*—The International Association for the Protection of Industrial Property (A.I.P.P.I.) holds for the first time in this country its biennnial Congress. In addition to business meetings, the program includes tours of the Patent Office arranged and conducted by Patent Office employees for the foreign delegates and visitors.

1958 *July 29.*—The National Aeronautics and Space Act imposes new functions and responsibilities upon the Patent Office with respect to inventions made in connection with research into problems of flight within and outside the earth's atmosphere.

August 8.—Congress enacts law creating a Trademark Trial and Appeal Board in the Patent Office, and revising the appeal procedure with respect to trademarks.

September 6.—Act of Congress authorizes enlargement of Patent Board of Appeals to a complement of not to exceed 15 members.

Robert C. Watson heads U.S. delegation to Lisbon Diplomatic Conference for Revision of International Convention for the Protection of Industrial Property, October 6-31.

1960 *February 23.*—Patent exceeding in size the Voss patent of 1943, granted to Amos E. Joel, Jr., for Accounting System, No. 2,925,957; contains 354 sheets of drawings, 266 pages of specifications, 620 pages total (243 claims).

David Lowell Ladd, thirty-eighth Commissioner of Patents, April 17, 1961 to October 1, 1963.

September 12.—Patent No. 3,000,000 for an Automatic Reading System is issued to Kenneth R. Eldredge, Palo Alto, Calif., assignor, to General Electric Co.

September 22.—President Kennedy signs into law a resolution authorizing a celebration of the American Patent System; on the same day issues Proclamation No. 3434 relating to American Patent System Week (October 15, 1961).

October 18 through 20.—Celebration of the 125th anniversary of the July 4, 1836 Patent Act takes place. Program includes an industrial exhibit, seminars on the patent system and the modern economy, meetings on information retrieval with guests from foreign patent offices, tours of the Patent Office, luncheon meetings, and a gala dinner and reception.

October 23 through 25.—The International Patent Office Workshop on Information Retrieval is held in Washington and the continuing ICIREPAT (International Cooperation in Information Retrieval Among Examining Patent Offices) organization is created.

1962 *January 4.*—The Lisbon 1958 Revision of the International Convention for the Protection of Industrial Property comes into force in the United States.

March 12.—The Final Report of the Management Survey of the Patent Office, 1961-62, conducted under the auspices of the Civil Service Commission and under the direction of Earl W. Kintner, former Chairman of the Federal Trade Commission, is submitted. One hundred seventy-nine formal recommendations are made.

May 21.—In line with the management survey report, an official responsible for research and development has for the first time been appointed to fill one of the three statutory assistant commissioner positions. Ezra Glaser, of Virginia, is sworn in on this date.

October 10.—The Drug Amendments Act authorizes the Secretary of Health, Education, and Welfare, upon request from the Commissioner of Patents, to furnish information with respect to such questions relating to drugs as the Commissioner may submit concerning any patent application.

November.—Patent Office Academy. An advanced training program for new examiners is inaugurated. Two classes of 60 examiners each, attending half-day sessions daily, completed the courses in May 1963. These groups included all examiners hired since September 1, 1961. The program aims to develop a well-trained examiner brought to maximum effectiveness in a minimum time; secure more uniform examining practice throughout the Office; and create close control of the quality of work done in the examining operation.

1963 *March.*—Automated Printing: Photocomposition of a new edition of the roster of *Attorneys and Agents Registered to Practice Before the U.S. Patent Office,* issued March 1963, is accomplished by using magnetic tape storage and computer processing. This is the first pamphlet to be printed by the Government Printing Office using this method, which by means of electronic computers and automatic typesetting equipment permits cheaper and faster printing of certain public documents.

May—.Movement of all examining groups incident to the reorganization of the Patent Examining Corps, as recommended in the 1963 Patent Office management survey, is completed.

October 12.—President Kennedy's Memorandum and Statement of Government Patent Policy is issued (28 F. R. 10943).

1964 *Edward J. Brenner, thirty-ninth Commissioner of Patents, March 11, 1964 to May 6, 1969.*

July 1.—New examining procedures designed ultimately to reduce the pendency period of patent applications and decrease the backlog of pending cases are instituted. Details of these procedures are set forth in Commissioner Brenner's address to the examining corps on June 8, 1964 (published June 23, 1964, 803 O. G. 896).

1965 *January 5.*—Design Patent No. 200,000 issued to Howard A. Richards and Jack L. Williams, Waukegan, Ill., assignors to Abbott Laboratories, North Chicago, Ill., for Dispensing Container for Tablets.

April-October.—Commemoration of the 175th Anniversary of the Patent System. Meetings, conferences, and seminars are held with industry and bar representatives, foreign visitors, government officials participating; luncheons, receptions and dinners are addressed by distinguished speakers.

April 8.—By Executive Order 11215, a President's Commission on the Patent System is established to make the first basic study of the System since its creation in its present form in 1836. (30 F. R. 4661, April 10, 1965).

July 24.—An Act of Congress effective October 25, 1965, increases substantially the fees chargeable by the Patent Office.

1966 *December 2.*—President Johnson releases the report of the President's Commission on the Patent System, which had been established April 8, 1965. The report considers the patent system as a whole and

contemplates revision by means of a coordinated plan of interrelated recommendations.

1967 *April 7.*—Movement of the Electrical Examining Operation from the Department of Commerce Building to quarters rented by the General Services Administration at Crystal Plaza (a new apartment-office-shopping complex on U.S. Highway 1 in Arlington County, Virginia, between Washington and Alexandria) is commenced. Movement of other units and employees continues as construction of the facility advances.

June 30.—The largest number of invention patents in history, 70,028 are granted in fiscal year 1967.

November.—Additional units of the Patent Office, including all the remainder of the patent examining operation, are moved to Crystal Plaza. The Commissioner, Assistant Commissioners, Solicitor, and other related units and their staffs occupy quarters November 13.

1968 *June-July.*— Patent Office units are moved to Building 2 of Crystal Plaza, leaving only the patent files, record room, numerical set of foreign patents, and bindery shop still to be moved from the Commerce Building.

1969 *William E. Schuyler, Jr., fortieth Commissioner of Patents, May 7, 1969 to August 25, 1971.*

September 3.—Patent No. 3,400,371 issued with 495 sheets of drawings and 469 pages of specification, a larger number of total pages than any preceding patent. There are 16 joint inventors, Gene M. Amdahl, et al., assignors to International Business Machines Corp., New York, N.Y.

1970 *February 28.*—Senate ratifies Convention establishing the World Intellectual Property Organization (WIPO), signed at Stockholm on July 14, 1967; and Paris Convention for the Protection of Industrial Property of March 20, 1883, as revised at Stockholm on July 14, 1967.

March 10.—Patent No. 3,500,000, for Self-Adaptive Echo Canceller, is issued to John L. Kelly, Jr., deceased by Myldred P. Kelly, executrix, Berkeley Heights, N.J., and Benjamin F. Logan, Jr., Madison, N. J., assignors to Bell Telephone Laboratories, Inc.

May 25-June 17.—Diplomatic Conference on the Patent Cooperation Treaty is held in Washington with 77 nations and 22 international organizations represented. The final draft of the treaty is signed on June 19 by 20 nations. The treaty remains open for signature until December 31, 1970.

1971 The Office of Technology Assessment and Forecast (OTAF) is established within the Patent Office. The mission of OTAF is to stimulate and enhance the useability of the U.S. patent file, and to assemble, analyze and make available meaningful data about the file.

January 4.—The Patent Office establishes the Disclosure Document Program which permits inventors to deposit with the Office papers disclosing their inventions. The papers can be used as evidence in establishing dates of conception of the inventions.

1972 *Robert Gottschalk, forty-first Commissioner of Patents, January 7, 1972 to June 20, 1973.*

February 23.—The Locarno Agreement Establishing an International Classification for Industrial Designs is ratified by the United States. The agreement enters into force with respect to the United States on May 25, 1972.

September 12.—President Nixon forwards The Patent Cooperation Treaty (PCT) to the United States Senate for its advice and consent to ratification.

October.—The Patent Office installs a computer-controlled data system to facilitate immediate public access to U.S. patent classification data.

1973 *February 11.*—The National Inventors Hall of Fame is founded for the purpose of honoring the Nation's inventors. Located in the Patent Office, it is co-sponsored by the National Council of Patent Law Associations. Thomas A. Edison is the first inductee into the Inventors Hall of Fame.

May 17-June 12.—The Diplomatic Conference on the Trademark Registration Treaty is convened in Vienna, Austria where fifty-six nations, including the United States, sign the final text on June 12, 1973.

May 22.—The United States ratifies the substantive provisions of the Paris Convention for the Protection of Industrial Property of March 30, 1883, as revised at Stockholm on July 14, 1967. The substantive provisions enter into force with respect to the United States on August 25, 1973. The administrative provisions had been ratified in 1970.

September 1.—The International Classification of Goods and Services, established under the Nice Agreement, is officially adopted by the Patent Office as the primary system of trademark classification.

December 21.—The Strasburg Agreement concerning the International Patent Classification System is ratified by the United States. The International Classification has been printed on United States patents as a secondary classification since the beginning of 1969.

1974 *January.*—The Trademark Manual of Examining Procedure is first published.

C. Marshall Dann, the forty-second Commissioner of Patents, February 11, 1974-August 31, 1977.

December 17.—The one-millionth U.S. trademark is registered to Cumberland Packing Corporation of Brooklyn, New York for a simple G clef and staff design used on "Sweet'n Low".

1975 *January 2.*—Public Law 93-596 changes the name of the "Patent Office" to the "Patent and Trademark Office" and the title "Commissioner of Patents" to the "Commissioner of Patents and Trademarks".

January 2.——Public Law 93-601 gives the Secretary of Commerce the authority to appoint Examiners-in-Chiefs. Positions of Examiners-in-Chiefs were previously presidential appointments.

November 26.—Following enactment of legislation for implementing the Patent Cooperation Treaty on November 14, 1975 (Public Law 94-131) the treaty is ratified by the United States and its instrument of ratification is deposited with the World Intellectual Property Organization (WIPO) in Geneva, Switzerland.

1976 *August.*—The Patent and Trademark Office installs an electronic security system in its public search facilities to avoid losses and to improve the integrity of its search files and patented files.

December 28.—Patent No. 4,000,000 is granted to Robert L. Mendenhall of Las Vegas, Nevada, on "Process for Recycling Asphalt Aggregate Compositions".

December 28.—Plant Patent No. 4,000 is granted to James C. Mikkelsen of Ashtabula, Ohio for a Poinsettia.

1977 *January 19.*—The Patent and Trademark Office adopts major changes in its regulations for examining patent applications. Patent owners are able to have the Office reexamine the patentability of their inventions by filing reissue applications when their original claims might be invalid. The regulations also require patent applicants to tell examiners information they know about which affects patentability, and make other changes to strengthen the reliability of issued patents.

February.—The Patent and Trademark Office provides a new microfilm center in the Public Search Room, with equipment to read and reproduce U.S. patent copies from microfilm in numerical sequence.

March.—A computer system is installed for updating records in the Trademark Search Room. The system replaces a cumbersome procedure of hand-stamping update information on paper copies of trademark registrations. Also, the computer provides information concerning the status and location of pending trademark applications.

April 14.—The Diplomatic Conference on a treaty concerning deposits of microorganisms in connection with patent applications is convened in Budapest, Hungary. Thirteen nations, including the United States, sign the final text on April 28, 1977.

May 4.—The Diplomatic Conference for the revision of the Nice Agreement concerning trademark classification is convened in Geneva, Switzerland. Fourteen nations, including the United States, sign the final text on May 13, 1978.

May.—The First Annual Patent Depository Library Conference is attended by representatives from the 22 Depositories across the nation. Later in the year, new libraries are added in: Houston, Texas; Birmingham, Alabama; Seattle, Washington; Raleigh, North Carolina; Denver, Colorado; and Dallas, Texas—bringing the total to 28.

July.—The Patent and Trademark Office institutes a unique, high speed system to reproduce patent copies from microfilm.

The average pendency time of patent applications is reduced to the lowest level in many years—18.9 months.

1978 *January 5.*—The number of Patent Depository Libraries across the nation is brought to 29 with the designation of a depository library in Lincoln, Nebraska.

January 24.—The Patent Cooperation Treaty (PCT) enters into force. On the same date, Public Law 94-131, the PCT implementing legislation comes into force. This law also provides for the filing of multiple dependent claims in regular United States national applications.

January.—The Patent and Trademark Office installs a new computer-generated microfiche index of patentees and assignees.

April 11.—The Patent and Trademark Office signs an agreement to become an International Searching Authority under the Patent Cooperation Treaty (PCT) and is appointed as such by the PCT Assembly on April 14.

June 1.—The first international application filed under the Patent Cooperation Treaty is received in the United States Receivieg Office. The Application was for "A Digital Time Division Switching Agreement" invented by William L. Arangwren, Sayreville, New Jersey, assignor to Western Electric Company, Inc.

Donald W. Banner, forty-third Commissioner of Patents and Trademarks, June 5, 1978 to June 30, 1979.

October 9.—The Diplomatic Conference for the revision of the International Convention for the Protection of New Varieties of Plants is convened in Geneva. Ten nations, including the United States, sign the final text on October 23, 1978.

A large and unexpected increase occurs in the rate of trademark filings; filings are up 50 percent since 1975.

December.—A Presidential Advisory Committee recommended the reliability of patent grants be improved by providing an adequate examining staff with modern search tools at the PTO, and a reexamination process to insure patentability of inventions has been considered in light of all prior printed publications.

1979 Three more Patent Depository Libraries are added: Memphis, Tennessee; Sacramento, California; and University Park, Pennsylvania—bringing the total to 32.

January.—A new computer system is installed. One of the most extensive on-line terminal networks is the federal government outside the Department of Defense is being designed to provide better information about the status and location of pending patent applications.

February 11.—The National Inventors Hall of Fame is dedicated at the 7th Annual Inventors Day celebration. Twenty-seven inventors have been inducted since 1973 with Dr. Robert Goddard (posthumously), Jay W. Forrester, Dr. Charles J. Plank and Edward J. Rosinski added in 1979 bringing the total to 31.

October 20.—An Energy Fair to Commemorate Thomas A. Edison on the 100th Anniversary of the invention of the light bulb is held in the Patent and Trademark Office. The program was keynoted by Chief Judge Howard T. Markey, U.S. Court of Customs and Patent Appeals.

October 31.—President Carter recommends legislation to strengthen and modernize the American patent system in order to encourage industrial innovation.

Sidney A. Diamond, forty-fourth Commissioner of Patents and Trademarks, November 29, 1979 to January 17, 1981.

1980 *May 17-18.*—The 50th Anniversary of Plant Patents is celebrated. A seminar sponsored by the Bureau of National Affairs leads off the celebration. Kathleen K. Meserve is honored for her outstanding work as a hybridizer at the formal opening of the floral exhibition.

June 16.—The number of Patent Depository Libraries is brought to 33 with the designation of the University of New Hampshire Library as a depository.

June 16.—The United States Supreme Court in the landmark decision of *Diamond v. Chakrabarty* rules that a living microorganism is patentable. The decision makes life forms patentable for the first time except under the plant patent laws.

Public Law 96-517, enacted in FY 1981, allows a patent owner or competitor to request the PTO to "reexamine" an issued U.S. patent and rule whether it should be amended or cancelled because of evidence of earlier work.

1981 *February 8.*—The 9th Annual National Inventors Day celebration is held with the induction of Harold S. Black, Chester F. Carlson (posthumously), Charles Stark Draper, and Nicolaus August Otto (posthumously) bringing the total of inductees to thirty-nine.

Gerald J. Mossinghoff, forty-fifth Commissioner of Patents and Trademarks, July 8, 1981 to January 21, 1985.

July 24.—Troy H. Middleton Library of Louisiana State University becomes the 37th Patent Depository.

November 19.—California inventors for the 17th straight year led the nation with 6,038 patents granted. A total of 71,010 patents issued with U.S. inventors receiving 43,194 and residents of foreign countries 27,816.

December 2.—A new computer search device is installed in the public search room of the Patent and Trademark Office to enable the public, for the first time, to automatically retrieve words and designs from the first page of any of 750,000 patents issued since 1971.

1982 *January 19.*—The Medical University of South Carolina in Charleston, South Carolina becomes the 38th patent depository library.

February 7.—The 10th Annual National Inventors Exposition is held with the induction of Henry Ford (posthumously), Jack S. Kilby, Ernest O. Lawrence (posthumously), Ottmar Mergenthaler (posthumously) and Max Tishler into the National Inventors Hall of Fame. This brings the total of inductees to forty-four.

March 4.—A 3-Point Plan is adopted to reduce the pendency for receiving a patent to 18 months by 1987 and to register trademarks

within 13 months by 1985. The plan involves taking realistic steps toward achieving a fully automated Patent and Trademark Office in the 1990's.

April 9.—The Court of Appeals for the Federal Circuit is established, combining the U.S. Court of Claims with the U.S. Court of Customs and Patent Appeals. It has jurisdiction over all patent appeals from various district courts as well as appeals from boards of the Patent and Trademark Office.

April 12.—Word processors are now in use at the Patent and Trademark Office and inventors will no longer receive handwritten letters from examiners processing their patent applications. This will eliminate more than 80,000 handwritten pieces of mail annually.

April 23.—Under a new system, the Classification and Search Support Information System (CASSIS), 36 patent depository libraries now have direct access to the Patent and Trademark Office. Previously, this information could only be obtained by searching bound volumes.

October 1.—Major increases in fees charged for PTO services go into effect. The increases were the first since 1965, and were designed to have users pay more of the cost of processing patent and trademark applications. The new filing fee for patent applications is $300, reduced one-half for independent inventors, small businesses and nonprofit organizations. The trademark filing fee was increased to $175 per class. Legislation provided for periodic review of the fee level by the Commissioner.

October 1.—Trademark operations are reorganized into "law offices."

October 1.—Examiner Education Program formally begins, sponsored by the PTO and Intellectual Property Owners, Inc. (IPO). The program is designed to give professionals an opportunity to visit a number of commercial and industrial installations to increase their knowledge and awareness of advances in technology.

October 25.—Public Law 97-366 elevates the status of the Commissioner to that of Assistant Secretary of Commerce.

November 16.—Applications for patents and trademarks were filed at a record pace in fiscal 1982, climbing to all-time highs in September due to the increase in filing fees that went into effect Oct. 1. This included 124,800 patent applications and 73,621 applications for the registration of trademarks.

December 13.—A master plan is submitted to Congress calling for complete automation of the Office's operations by 1990.

1983 *January 6.*—The Patent and Trademark Office is singled out as one of the best-managed agencies in Washington. Commerce Secretary Malcolm Baldrige presented the Distinguished Public Service Award to agency employees at a special ceremony.

January 21.—United States and Japanese patent officials enter into an agreement for greater cooperation in automating their operations and disseminating patented technology. Each office will exchange technical experts in the fields of automation and patent documentation.

February 13.—The 11th Annual National Inventors Expo included the induction of five inventors into the National Inventors Hall of Fame. Ernest Alexanderson (posthumously), Andrew Alford, Herbert Henry Dow (posthumously), Robert N. Noyce, and George R. Stibitz were inducted, joining forty-four others previously inducted.

May 19.—A computer system which provides up-to-the minute information about 500,000 active trademarks and over 120,000 pending applications is in operation at the Patent and Trademark Office.

July 9.—A National Trademark Exposition, featuring displays from 30 major corporations is held in the Commerce Department's Great Hall. It drew large numbers of visitors, and was to become an annual summer event.

October 17.—The Patent and Trademark Office hosts the first Trilateral meeting with the European and Japanese Patent Offices. The meeting was an important step toward achieving the Office's goal of making possible the international exchange of computerized data by 1990.

December 22.—Texas A & M University Library becomes the 47th patent depository, the third designated in Texas. During the year patent depositories were also established at the University of Nevada (Reno), University of Texas at Austin, Indianapolis Marion County Library, Auburn University, University of Idaho, University of Michigan at Ann Arbor, and University of New Mexico at Albuquerque.

1984

February 12.—The 12th Annual National Inventors Expo is held. William Meriam Burton (posthumously), Wallace Hume Carothers (posthumously), Philo Taylor Farnsworth (posthumously), and Theodore Harold Maiman were inducted into the National Inventors Hall of Fame.

February 12.—Marina Kazragis, a Chevy Chase, Maryland resident, won the national contest for a new patent grant design.

February 27.—In 1983 Japanese inventors received 9,212 patents, the most of any foreign country and Californians received 5,112. Out of 61,985 patents issued in 1983, 36,561 went to U.S. individuals, corporations and institutions.

April 12.—Planning Research Corp., of McLean, Virginia is selected as the contractor to develop and install the automated patent system.

April 20.—The Patent and Trademark Office establishes a special cash award program for clerical employees. Cash awards of $100 will be presented to a maximum of five recipients of the Clerical Employee of the Quarter Award. The Clerical Employee of the Year will receive $1,000.

May 16.—The Patent and Trademark Office and the Food and Drug Administration are cooperating to encourage development of drugs and other products used in the treatment of patients with rare diseases or unusual physical problems. Under the terms of the agreement, the PTO will expedite applications for patents on orphan drugs or other orphan products designated by the FDA. Orphan products include special foods and medical devices for rare conditions.

July 7.—The second annual National Trademark Exposition is held in the National Tourist Information Center (Great Hall) of the Herbert C. Hoover Building.

August 21.—The Office undertakes procedures to provide better protection for the thousands of pending patent and trademark applications. The measures include close monitoring of the guard service, tightening security in the file repositories and construction of a secure area for patented files.

August 28.—A major initiative aimed at assisting Latin American industrial property offices in the automation of their trademark operations is proposed by the U.S. delegation at a meeting sponsored by the Colombian Government, the UN Development Program, and the World Intellectual Property Organization, in Bogota, Colombia.

October 16.—A new memorandum of understanding is jointly entered into by the European Patent Office, the Japanese Patent Office, and the United States to extend their cooperation in the field of intellectual property. The memorandum stresses the importance of industrial property as a basic system supporting the progress of technology.

November 2.—P.L. 98-622 was signed, providing for a number of amendments to patent laws, including provision for a Statutory Invention Registration System (SIRS) and setting up a combined Board of Patent Appeals and Interferences.

December 4.—The Anchorage Municipal Libraries at Anchorage, Alaska becomes the 56th patent depository. Others added in 1984 were the San Diego Public Library, Illinois State Library, the Engineering and Physical Sciences Library of the University of Maryland, the Montana College of Mineral Science in Butte, the University of Utah Marriott Library in Salt Lake City, Miami-Dade Public Library in Florida, Broward County (Florida) Main Library in Fort Lauderdale, and University of Massachusetts Library at Amherst.

December 19.—The Patent and Trademark Office inaugurates two on-line computer services for patent examiners and other staff. The services are part of the agency's program to automate its operations.

1985

February 9.—The 13th Annual National Inventors Expo is held, featuring demonstrations and displays by inventors and companies. Marvin Camras, Willis H. Carrier (posthumously), Willem J. Kolff, Louis M. Moyroud, Rene A. Higonnet (posthumously), and Roy J. Plunkett were inducted into the National Inventors Hall of Fame.

July 27.—The Third Annual Trademark Exposition attracts thousands of visitors to the Great Hall of the Herbert C. Hoover Building.

September 26.—Virginia Commonwealth University of Richmond is designated a patent depository. Other new depositories named in 1985 were the Arkansas State Library at Little Rock, Oregon State Library at Salem, and Vanderbilt University Library at Nashville, Tennessee.

Donald J. Quigg, forty-sixth Commissioner of Patents and Trademarks, October 13, 1985 to . (Served as Deputy Commissioner from 1981 before becoming Commissioner.)

October 17.—The Trademark Examining Operation achieves its goal of expediting trademark applications and registrations within 3 months of filing and final action within 13 months. In 1984 it took an average of 24 months to register a trademark.

October 18.—The first National Creative and Inventive Thinking Skills Conference was held in Washington, D. C. to teach teachers to teach creative thinking in the Nation's school systems across the U.S. The conference was co-sponsored by the Patent and Trademark Office and the Intellectual Property Owners, Inc. (IPO).

1986 *February 8.*—The 14th Annual National Inventors Expo is held featuring energy-saving devices, communication systems, computers and games. Luther Burbank, (posthumously), Harold E. Edgerton, Wilson Greatbatch, Ernest H. Volwiler and Donalee L. Tabern (posthumously) were inducted into the National Inventors Hall of Fame. Two school children are also honored for their winning entries in a national invention contest sponsored by the ***Weekly Reader*** newspaper.

March 14.—Japanese inventors led foreigners receiving U.S. patents. Of the 75,302 patents issued in 1985, a total of 32,539 or 43.9 percent, went to foreign residents. Of the 42,763 issued to U.S. residents, Californians received 5,942 patents.

April 18.—Terms of eight pharmaceutical company patents are extended. A 1984 law allows extension of the patent term for up to five years for pharmaceuticals and other products subject to regulatory review by the Food and Drug Administration to compensate for marketing delays resulting from testing.

July 1.—The first stage of an automated patent search system, which will revolutionize the patent examination process started by Thomas Jefferson, is inaugurated at the Patent and Trademark Office. Under the new system, patent examiners will use electronic work stations to determine which of the more than 120,000 applications filed annually should be granted.

July 26.—The fourth annual Trademark Exposition is held in the Great Hall of the Herbert C. Hoover Building.

September 23.—A historic milestone was reached with the issuance of the one millionth patent produced by electronic photocomposition methods.

September A film "From Dreams to Reality: A Tribute to Minority Inventors" was produced by the Office with the help of the Economic Development Administration and Office of Minority Business Development Agency of the Department of Commerce. It later won a number of prestigious awards, and was incorporated as part of a traveling exhibit.

December 8.—Howard University Libraries in Washington, D.C. receives patent depository library status. Other depositories named this year were the Free Library of Philadelphia, University of California Library at Irvine, and The Science Park Library in New Haven, Connecticut.

1987 *February 7.*—Inventions ranging from advances in electronic technology to labor saving devices for everyday use were on display during the 15th Annual National Inventors Expo. Two school children were honored for their winning entries in the 1987 ***Weekly Reader*** contest. They were honored along with Arnold O. Beckman, William S. Burroughs (posthumously), Andrew J. Moyer (posthumously), and Igor I. Sikorsky (posthumously) who were inducted into the National Inventors Hall of Fame.

March 13.—Foreign residents received 45 percent of the patents issued in 1986. Of the 76,993 patents issued, a total of 34,606 went to foreign residents. Since 1965 the percentage of U.S. patents obtained by foreigners has increased from 20% to about 45%. Japan again accounted for the largest number—13,644 up from 12,783 obtained in 1985.

April 17.—The Patent and Trademark Office announces that it will consider applications for patents on new types of animals produced by human intervention. The announcement came after an agency appellate board ruled in an application for a patent on a method of inducing "polyploidy" (sterility) in oysters by applying hydrostatic pressure. Products found in nature will not be considered patentable subject matter.

June 5.—The second National Creative and Inventive Thinking Skills Conference was held in Buffalo, New York. The conference was attended by several hundred teachers from school systems throughout the U.S.

June 27.—The fifth annual National Trademark Exposition is held in the Great Hall of the Herbert C. Hoover Building.

July 1.—Chapter II of the Patent Cooperation Treaty enters into effect for the United States. U.S. patent applicants may now request an international preliminary examination of their inventions filed under PCT.

August 8.—Project XL is officially launched to help restore the country's technological leadership through encouraging analytical thinking by the nation's school children. The PTO will serve as a coordinator of the project.

1988 *January 8.*—A Patent Advisory Committee to advise the Office on a broad range of policy matters holds its first meeting at the PTO headquarters. The committee is made up of 17 members, appointed for a two year term to serve without compensation.

February 22.—Foreign residents received 46.6 percent of the record number of patents issued in 1987. A total of 41,674 patents were issued to foreign residents with Japan accounting for the largest number—17,288. Of the total 47,711 patents issued to U.S. residents, Californians received 7,083.

March 27.—Four inductees were inducted into the National Inventors Hall of Fame. Frank B. Colton for oral contraceptives, Elisha Graves Otis (honored posthomously) for his safety device for the elevator, Louis W. Parker for the television receiver and An Wang for his invention of the magnetic pulse controlling device. The induction

highlighted a three day event which began with a conference on Innovation and Creativity.

April 12.—The first animal patent issues to Harvard University covering a mouse that is designed to radically improve the process of detecting cancer reproducing substances. Patent No. 4,736,866 entitled Transgenic Non-Human Mammal covers the mouse produced by a novel technique developed by Dr. Philip Leder and Dr. Timothy Stewart.

APPLICATIONS FILED AND PATENTS ISSUED SINCE 1790

PATENTS GRANTED FROM 1790 TO 1836

(Calendar Years) Year	Patents	(Calendar Years) Year	Patents
1790	3	1814	210
1791	33	1815	173
1792	11	1816	206
1793	20	1817	174
1794	22	1818	222
1795	12	1819	156
1796	44	1820	155
1797	51	1821	168
1798	28	1822	200
1799	44	1823	173
1800	41	1824	228
1801	44	1825	304
1802	65	1826	323
1803	97	1827	331
1804	84	1828	368
1805	57	1829	447
1806	63	1830	544
1807	99	1831	573
1808	158	1832	474
1809	203	1833	586
1810	223	1834	630
1811	215	1835	752
1812	238	1836	599
1813	181		

APPLICATIONS AND PATENTS 1836 TO 1987

Calendar Year	Total applications	Patents			
		Inventions	Designs	Reissues	Total
1837	[2]650	424	.....	[3]11	436
1838	[2]900	515	.....	6	521
1839	[2]800	404	.....	13	417
1840	765	458	.....	10	468
1841	847	490	.....	6	496
1842	761	488	1	13	501
1843	819	494	14	11	519
1844	1,045	478	14	7	497
1845	1,246	473	17	11	501
1846	1,272	566	59	13	638
1847	1,531	495	60	14	569
1848	1,628	583	46	23	652
1849	1,955	984	49	30	1,063
1850	2,193	883	83	26	992
1851	2,258	752	90	25	867
1852	2,639	885	109	20	1,014
1853	2,673	846	86	29	961
1854	3,324	1,755	57	28	1,840
1855	4,435	1,881	70	51	2,002
1856	4,960	2,302	107	83	2,492
1857	4,771	2,674	113	97	2,884
1858	5,364	3,455	102	126	3,683
1859	6,225	4,160	108	231	4,499
1860	7,653	4,357	183	232	4,772
1861	4,643	3,020	142	149	3,309
1862	5,038	3,214	195	116	3,525
1863	6,014	3,773	176	227	4,176
1864	6,932	4,630	139	248	5,017
1865	10,664	6,088	221	296	6,605
1866	15,269	8,863	294	290	9,457
1867	21,276	12,277	325	400	13,002
1868	20,420	12,526	446	420	13,392
1869	19,271	12,931	506	534	13,971
1870	19,171	12,137	737	439	13,313
1871	19,472	11,659	905	454	13,028
1872	18,246	12,180	884	529	13,593
1873	20,414	11,616	747	501	12,864
1874	21,602	12,230	886	483	13,599
1875	21,638	13,291	915	631	14,837
1876	21,425	14,169	802	621	15,592
1877	20,947	12,920	699	568	14,187
1878	20,260	12,345	590	509	13,444
1879	20,059	12,125	592	488	13,205
1880	23,012	12,926	515	506	13,947
1881	26,059	15,548	565	471	16,584
1882	31,522	18,135	861	271	19,267
1883	34,576	21,196	1,020	167	22,383
1884	35,600	19,147	1,150	116	20,413
1885	35,717	23,331	773	129	24,233
1886	35,968	21,797	595	116	22,508
1887	35,613	20,429	949	99	21,477
1888	35,797	19,585	835	86	20,506

[1]From July 4.
[2]Estimate.
[3]The reissues for 1836 and 1837 are numbered with the other patents and thereafter are separately numbered.

APPLICATIONS AND PATENTS 1836 TO 1987 (Continued)

Calendar Year	Total applications	Patents			
		Inventions	Designs	Reissues	Total
1889	40,575	23,360	723	75	24,158
1890	41,048	25,322	886	84	26,292
1891	40,552	22,328	836	80	23,244
1892	40,753	22,661	817	81	23,559
1893	38,473	22,768	902	99	23,769
1894	38,439	19,875	928	64	20,867
1895	40,680	20,883	1,115	59	22,057
1896	43,982	21,867	1,445	61	23,373
1897	47,905	22,098	1,631	65	23,794
1898	35,842	20,404	1,803	60	22,267
1899	41,443	23,296	2,139	92	25,527
1900	41,980	24,660	1,758	81	26,499
1901	46,449	25,558	1,734	81	27,373
1902	49,641	27,136	640	110	27,886
1903	50,213	31,046	536	119	31,701
1904	52,143	30,267	557	110	30,934
1905	54,971	29,784	486	129	30,399
1906	56,482	31,181	625	159	31,965
1907	58,762	35,880	589	151	36,620
1908	61,475	32,757	757	168	33,682
1909	65,839	36,574	687	160	37,421
1910	64,629	35,168	639	123	35,930
1911	69,121	32,917	1,010	157	34,084
1912	70,976	36,231	1,342	158	37,731
1913	70,367	33,941	1,683	164	35,788
1914	70,404	39,945	1,715	190	41,850
1915	70,069	43,207	1,545	182	44,934
1916	71,033	43,970	1,759	198	45,927
1917	70,373	41,069	1,512	179	42,760
1918	59,800	38,569	1,207	165	39,941
1919	80,638	36,872	1,523	203	38,598
1920	86,893	37,164	2,485	233	39,882
1921	93,395	37,885	3,277	239	41,401
1922	89,028	38,414	1,627	256	40,297
1923	80,653	38,634	1,927	226	40,787
1924	80,888	42,594	2,671	235	45,500
1925	84,627	46,450	2,824	266	49,540
1926	86,116	44,750	2,602	275	47,627
1927	92,122	41,731	2,387	326	44,444
1928	92,725	42,376	3,188	335	45,899
1929	94,738	45,284	2,907	374	48,565
1930	94,203	45,243	2,712	367	48,322

APPLICATIONS AND PATENTS 1836 TO 1987 (Continued)

Calendar Year	Total applications	Patents				
		Inventions	Plants	Designs	Reissues	Total
1931	84,423	51,766	5	2,937	395	55,103
1932	71,864	53,473	46	2,944	393	56,856
1933	60,633	48,786	33	2,412	333	51,563
1934	61,572	44,429	32	2,921	371	47,753
1935	64,369	40,638	45	3,866	395	44,944
1936	69,585	39,793	49	4,556	422	44,820
1937	72,984	37,695	55	5,137	384	43,271
1938	75,429	38,076	41	5,027	349	43,493
1939	71,689	43,090	45	5,593	352	49,080
1940	69,857	42,248	85	6,145	372	48,850
1941	59,901	41,122	62	6,486	309	47,979
1942	50,057	38,467	65	3,728	250	42,510
1943	48,724	31,074	47	2,229	173	33,523
1944	59,472	28,073	38	2,916	170	31,197
1945	76,119	25,702	17	3,524	121	29,364
1946	91,972	21,803	56	2,778	121	24,758
1947	83,313	20,139	52	2,102	130	22,423
1948	75,952	23,963	44	3,968	111	28,086
1949	74,810	35,131	93	4,450	118	39,792
1950	74,295	43,040	89	4,718	129	47,976
1951	64,949	44,326	58	4,163	134	48,681
1952	68,384	43,616	101	2,959	163	46,839
1953	79,486	40,468	78	2,714	151	43,411
1954	82,968	33,809	101	2,536	155	36,601
1955	83,266	30,432	103	2,713	187	33,435
1956	80,035	46,817	101	2,977	158	50,053
1957	79,242	42,744	129	2,362	150	45,385
1958	82,804	48,406	120	2,375	171	51,072
1959	83,833	52,470	101	2,769	177	55,517
1960	84,475	47,170	116	2,543	157	49,989
1961	88,340	48,368	108	2,487	189	51,152
1962	90,373	55,691	91	2,300	202	58,284
1963	91,091	45,679	129	2,965	197	48,970
1964	93,170	47,378	128	2,686	200	50,392
1965	100,421	62,857	120	3,424	246	66,647
1966	93,482	68,406	114	3,188	179	71,887
1967	93,011	65,652	85	3,165	196	69,098
1968	98,737	59,102	72	3,352	187	62,713
1969	104,357	67,557	103	3,335	234	71,229
1970	109,359	64,428	52	3,214	269	67,963
1971	111,095	78,316	71	3,156	246	81,789
1972	105,300	74,813	199	2,901	275	78,188
1973	109,622	74,139	132	4,033	314	78,618
1974	107,448	76,275	261	4,303	435	81,274
1975	107,950	71,994	156	4,282	378	76,804
1976	109,989	70,236	176	4,564	424	75,400
1977	108,992	65,269	173	3,929	410	69,781
1978	109,308	66,102	186	3,862	364	70,514
1979	107,409	51,686	151	3,269	312	55,418
1980	104,219	56,618	137	4,167	305	61,227
1981	114,490	65,771	183	4,745	364	71,063
1982	118,449	57,588	173	4,944	270	63,275
1983	112,351	56,560	197	4,562	361	61,980
1984	120,576	67,200	212	4,938	300	72,650
1985	127,071	71,661	242	5,066	276	77,245
1986	133,014	70,860	224	5,518	260	76,862
1987	139,832	82,952	229	5,959	245	89,385

TRADEMARK REGISTRATIONS AND RENEWALS, 1870 TO 1987

(Calendar Years)	Registrations	(Calendar Years)	Registrations
1870	121	1892	1,737
1871	486	1893	1,677
1872	491	1894	1,806
1873	492	1895	1,829
1874	559	1896	1,813
1875	1,138	1897	1,671
1876	959	1898	1,238
1877	1,216	1899	1,649
1878	1,455	1900	1,721
1879	872	1901	1,928
1880	349	1902	2,006
1881	834	1903	2,186
1882	947	1904	2,158
1883	902	1905	4,490
1884	1,021	1906	10,568
1885	1,067	1907	7,878
1886	1,029	1908	5,191
1887	1,133	1909	4,184
1888	1,059	1910	4,239
1889	1,229	1911	4,205
1890	1,415	1912	5,020
1891	1,762	1913	5,065

*The tabulation of renewals has been made from an actual count of the renewals as published in the Official Gazette. The first renewals (4) were published in the O.G. of July 14, 1914. However, since the issue of July 14, 1914 published a renewal of a registration dated September 27, 1881 and renewed September 27, 1911, it is not known whether certain registrations may have been renewed and not published prior to those first appearing in 1914.

The Act of March 3, 1881, which granted registrations for a term of 30 years, did not provide for renewals; renewals for a term of 20 years were first provided for in the Act of February 20, 1905, which authorized renewals of registrations under the 1881 act. Therefore, the first registrations which became eligible were those whose 30-year term under the 1881 act expired in 1911. Original registrations under the 1905 act did not become eligible for renewal until 1925.

TRADEMARK REGISTRATIONS AND RENEWALS, 1870 TO 1987 (Continued)

(Calendar Years)

	Registrations	Renewals
1914	6,817	48
1915	6,262	57
1916	6,791	55
1917	5,339	52
1918	4,061	38
1919	4,208	64
1920	10,282	73
1921	11,654	117
1922	12,793	254
1923	14,845	251
1924	15,749	227
1925	13,815	2,278
1926	14,955	4,273
1927	14,579	3,063
1928	14,133	2,049
1929	14,514	1,750
1930	13,246	1,661
1931	11,400	1,643
1932	9,603	1,587
1933	9,130	1,671
1934	11,362	2,445
1935	10,886	1,874
1936	10,722	1,888
1937	11,242	1,524
1938	11,204	1,051
1939	10,521	1,398
1940	9,974	2,547
1941	8,530	2,765
1942	6,795	2,894
1943	5,594	3,835
1944	6,025	4,052
1945	7,490	4,210
1946	8,106	5,725

(Calendar Years)

	Registrations	Renewals
1947	8,976	6,139
1948	11,472	5,056
1949	15,968	3,788
1950	16,817	3,564
1951	17,376	3,350
1952	16,172	3,419
1953	15,610	3,103
1954	15,946	3,491
1955	18,204	4,268
1956	20,753	3,756
1957	17,483	3,488
1958	15,355	3,070
1959	18,745	3,272
1960	18,434	3,933
1961	16,595	3,358
1962	17,023	2,809
1963	19,740	2,655
1964	20,090	2,702
1965	18,501	3,165
1966	20,259	3,585
1967	20,036	3,801
1968	21,528	4,646
1969	20,613	6,176
1970	21,745	6,076
1971	21,019	6,213
1972	23,252	5,037
1973	26,112	5,397
1974	28,099	5,513
1975	30,931	1,132
1976	26,326	6,754
1977	25,858	6,060
1978	29,630	5,454
1979	22,210	5,404
1980	14,614	5,862
1981	42,700	5,900
1982	42,400	6,000
1983	46,800	5,500
1984	55,500	5,100
1985	65,796	6,505
1986	46,673	5,144
1987	47,288	4,069

Superintendents and Commissioners of Patents (and Trademarks)

1.	Dr. William Thornton	1802-1828	"Chief" and adopted title "Superintendent"
2.	Dr. Thomas P. Jones	1828-1829	
3.	Dr. John D. Craig	1829-1835	"Superintendent" official title 1830
4.	J. C. Pickett	1835	
5.	Henry L. Ellsworth	1835-1845	1st "Commissioner" (title change 7/4/1836)
6.	Edmund Burke	1845-1849	2nd Commissioner
7.	Thomas Ewbank	1849-1852	3rd Commissioner
8.	Silas Henry Hodges	1852-1853	4th Commissioner
9.	Charles Mason	1853-1857	5th Commissioner
10.	Joseph Holt	1857-1859	6th Commissioner
11.	William Darius Bishop	1859-1860	7th Commissioner
12.	Philip Francis Thomas	1860	8th Commissioner
13.	David P. Holloway	1861-1865	9th Commissioner
14.	Thomas C. Theaker	1865-1868	10th Commissioner
15.	Elisha Foote	1868-1869	11th Commissioner
16.	Samuel Sparks Fisher	1869-1870	12th Commissioner
17.	Gen. Mortimer D. Leggett	1871-1874	13th Commissioner
18.	John Marshall Thacher	1874-1875	14th Commissioner
19.	Robert Holland Duell	1875-1876	15th Commissioner
20.	Ellis Spear	1877-1878	16th Commissioner
21.	Gen. Halbert Eleazer Paine	1878-1880	17th Commissioner
22.	Edgar M. Marble	1880-1883	18th Commissioner
23.	Benjamin Butterworth	1883-1885	19th Commissioner
24.	Martin V. B. Montgomery	1885-1887	20th Commissioner
25.	Benton J. Hall	1887-1889	21st Commissioner
26.	Charles Elliott Mitchell	1889-1891	22nd Commissioner
27.	William Edgar Simonds	1891-1893	23rd Commissioner
28.	John S. Seymour	1893-1897	24th Commissioner
29.	Benjamin Butterworth	1897-1898	—2nd term—
30.	Charles Holland Duell	1898-1901	25th Commissioner
31.	Frederick Innes Allen	1901-1907	26th Commissioner
32.	Edward Bruce Moore	1907-1913	27th Commissioner
33.	Thomas Ewing	1913-1917	28th Commissioner
34.	James T. Newton	1917-1920	29th Commissioner
35.	Robert Frederick Whitehead	1920-1921	30th Commissioner
36.	Melvin H. Coulston	1921	31st Commissioner
37.	Thomas E. Robertson	1921-1933	32nd Commissioner
38.	Conway P. Coe	1933-1945	33rd Commissioner
39.	Casper W. Ooms	1945-1947	34th Commissioner
40.	Lawrence C. Kingsland	1947-1949	35th Commissioner
41.	John A. Marzall	1949-1953	36th Commissioner
42.	Robert C. Watson	1953-1961	37th Commissioner

Superintendents and Commissioners of Patents (and Trademarks)—Cont.

43. David Lowell Ladd	1961-1963	38th Commissioner
44. Edward J. Brenner	1964-1969	39th Commissioner
45. William E. Schuyler, Jr.	1969-1971	40th Commissioner
46. Robert Gottschalk	1972-1973	41st Commissioner
47. C. Marshall Dann	1974-1977	42nd Commissioner
48. Donald W. Banner	1978-1979	43rd Commissioner
49. Sidney A. Diamond	1979-1981	44th Commissioner
50. Gerald J. Mossinghoff	1981-1985	45th Commissioner Assistant Secretary and Commissioner of Patents and Trademarks (10/25/82)
51. Donald J. Quigg	1985----	46th Commissioner

PUBLICATIONS AVAILABLE FROM THE PATENT OFFICE

Orders should be addressed to Commissioner of Patents and Trademarks, Washington, D.C. 20231. Remittances should be made payable to Commissioner of Patents. Postage stamps, Superintendent of Documents coupons or other Government coupons are not acceptable in payment of Patent Office fees.

Patents.—Copies of the specification and drawings of all patents are sold at $1.50 each. When ordering, identify the patent by the patent number, or give full name of inventor and approximate date of issuance of the patent.

Trademarks.—Printed copies of registered marks are sold at $1.50 cents each. When ordering, identify the trademark by registration umber or give the name of the registrant and the approximate date of registration.

PUBLICATIONS AVAILABLE FROM SUPERINTENDENT OF DOCUMENTS

Orders should be addressed to Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Remittances should be made payable to Superintendent of Documents.

General Information Concerning Patents.—Contains a vast amount of general information concerning the application for and granting of patents, expressed in non-technical language for the layman. Price $2.00.

Basic Facts About Trademarks.—Same as above for trademarks. Price $1.75.

Patent Official Gazette.—The official journal of the Patent Office relating to patents. Issued each Tuesday, simultaneously with the weekly issuance of patents, it contains a selected figure of the drawings and an abstract of each patent granted, indexes of patents, a list of patents available for license or sale, and general information such as orders, notices, changes in rules and changes in classification. Annual subscription $347.00; Priority $523.00 (additional for foreign mailing.) Single copy $21.00.

Trademark Official Gazette.—The official journal of the Patent Office relating to trademarks. Published every Tuesday, it contains an illustration of each trademark published for opposition, a list of trademarks registered, a classified list of registered trademarks, and Patent Office notices. Annual subscription $302.00 ($377.50 for foreign mailing.) Single copy $9.50.

Annual Indexes.—Annual indexes are published for both patents and trademarks. Prices vary depending upon size of the publication.

Manual of Classification.—A loose-leaf volume listing the numbers and descriptive titles of the more than 300 classes and 100,000 subclasses used in the subject classification of patents, with an index. Substitute and additional pages as issued from time to time as part of the subscription service. Subscription $49.00 ($12.25 additional for foreign mailing.)

Manual of Patent Examining Procedure.—A loose-leaf manual which serves primarily as a detailed reference work on patent examining practice and procedure for the Patent Office's Examining Corps. Subscription service includes basic manual, quarterly revisions, and change notices. Subscription $70.00 ($17.50 additional for foreign mailing.)

37 Code of Federal Regulations.—Contains the rules in force governing he procedures in the Patent Office. It also contains an appendix of forms. Price $13.00.

Trademark Rules of Practice of the Patent Office With Forms and Statutes.—Contains in one volume rules, laws, and forms relating to trademarks. Price $5.00.

Patent Attorneys and Agents Registered to Practice Before the U.S. Patent & Trademark Office.—A geographical listing of patent attorneys and agents registered to represent inventors before the U.S. Patent Office. Price $17.00.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

DEPARTMENT OF COMMERCE
UNITED STATES OF AMERICA